DALLAS NUMBER *Dallas Session April 19-23*

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THE JOURNAL

OF THE

American Medical Association

Annual Subscription, $5.00 — PUBLISHED WEEKLY — Single Copies, 20 Cents

VOLUME 86, No. 11 — 535 North Dearborn Street, CHICAGO, ILL. — MARCH 13, 1926

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Entered as Second-Class Matter, June 25, 1885, at the Postoffice at Chicago, Ill., under Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized on June 14, 1918. If undeliverable, return postage is guaranteed

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The Journal of the American Medical Association

Published Under the Auspices of the Board of Trustees

VOL. 86, NO. 11 CHICAGO, ILLINOIS MARCH 13, 1926

HELIOTHERAPY AT LOW ALTITUDES

ITS SIGNIFICANCE AND TECHNIC*

ALBERT H. FREIBERG, M.D.

CINCINNATI

That the rays of the sun exerted an especially favorable influence on wounds and particularly on tuberculous diseases of the extremities was announced by Bernhard in 1902. His original application of this method of treatment consisted simply in the exposure of the affected parts to the sun's rays. The application of this method to the whole body and its popularization are to be credited to Rollier, who established his clinic at Leysin, Switzerland, in 1903. As the result of the remarkable cures which he was able to show, and in consequence of the appearance of his book in 1915, the treatment of surgical tuberculosis by heliotherapy has been the subject of much discussion by the medical profession. It may be said that the point has been reached at which any defense of the value of this method in tuberculosis of the bones and joints may be considered a matter of supererogation. But there are a number of questions involved in the application of heliotherapy on which opinions still vary, and some of them become of primary importance as the necessity arises for the employment of heliotherapy in environments which differ radically from that in which Rollier developed his method with such remarkable success. By Rollier, himself, great stress is laid on the importance of his Alpine environment, not only because of the purity of the air, but also because of the fact that the sun's rays are here richer in their content of the ultraviolet rays. These rays, invisible to the eye, are to his mind the chief source of the potency of the sunshine in the cure of disease. They are filtered out to a considerable extent by the atmosphere of lower altitudes, and this accounts for a lessened potency of the sun's rays near the sea level.

The use of the principles of heliotherapy as laid down by Rollier has become well nigh universal, and it is most unusual to find an article dealing with the treatment of surgical tuberculosis which does not speak of this method approvingly. This would, in itself, seem to be an acknowledgment that it is possible to offer patients the advantages of heliotherapy far away from an environment like that of Rollier's Alpine sanatorium. Indeed, it must be said that some of the most enthusiastic advocacy of Rollier's methods comes from men who are working in situations as different from his as can well be imagined. Such are Gauvain in England, Kisch in Germany, Lo Grasso of Perrysburg, N. Y., and Hyde of Akron, Ohio. All of them are agreed that it is possible to do the same things for surgical tuberculosis in low altitudes as Rollier is able to do in the Alpine highland. Kisch, to whom reference will be made later, asserts that, in the institution at Hohenlychen near Berlin, it is possible for him to attain cures as rapidly as is the case at Leysin, and that his statement is made with a thorough familiarity with the situation here by reason of several weeks' residence for study. He holds that there is a distinct advantage in having the tuberculous patient cured in the very same environment in which his disease was acquired and that it may be assumed possible, in this way, to avoid many of the recurrences that are otherwise to be expected. There is every reason, therefore, to strive for the attainment of procedures of highest possible efficacy which may be employed in our altitude, near the patients' homes; perhaps, indeed, in the homes of some of the patients.

What are the conditions that must be met in order to make practical the employment of heliotherapy in low altitudes? It may not be denied that the conditions are in few places as favorable for heliotherapy as they are at Leysin or, indeed, in many other mountainous situations. Even at Leysin there are, especially in the winter months, numerous periods when the hours of insolation must be greatly curtailed because there is no sunshine but, not seldom, heavy clouds and a moist atmosphere. Thus, we find from Rollier's own figures that, whereas there were in the month of August 227 hours of insolation possible, as an average of five years, for the month of December the average was 109, for February 117 and for November 126. The records of the United States weather bureau for thirty years show that December would give us about 65 per cent of this number of hours of possible insolation in Cincinnati, and in Buffalo only about 40 per cent. If we assume that six hours of insolation daily would be an average maximum, 180 hours would represent an average maximum for a month. Leysin would therefore offer only 60 per cent of the possible maximum of insolation in December, and it should appear highly desirable to find a substitute for this deficiency. It would seem even more necessary to do this for climates and altitudes such as ours. Moreover, it must be noted that high winds and highly inclement weather furnish additional obstacles, making it necessary to keep the patients indoors for days at a time unless the installation and location are of unusually fortunate character. In order to meet these contingencies, a substitute for the sunshine would seem most desirable even at Leysin and very much more so for localities similar to ours. It has been sought to provide for this need by using different forms of artificial light.

* Read before the Academy of Medicine of Toledo, Ohio, Dec. 4, 1925.

FAVORABLE ACTION OF ULTRAVIOLET RAYS

The moment we assume the desirability of finding a source of light to use as a substitute for the sun, we are confronted with the need for an explanation of the favorable action of the sun's rays. It has been already remarked that, by Rollier, the therapeutic action is ascribed chiefly, if not altogether, to the ultraviolet rays of the spectrum. This is done on the basis of certain scientific observations which, for the present, I shall not discuss. It will be remembered, however, that the superiority of high altitudes for the purposes of heliotherapy is attributed by Rollier to the fact of richness in ultraviolet rays: rays that are filtered out in large measure by the lower strata of the atmosphere, near the sea level. On the other hand, it is here necessary to note that for Rollier and those who have followed his methods, the measure of success that may be expected in the individual case lies in the degree of pigmentation of the skin that can be secured by means of continued insolation. This conclusion is derived from clinical observation and data; its explanation is not determined and is a matter of differing opinions. At this juncture it may not be amiss to quote Gauvain,[1] who says:

> Though light treatment has been extensively scientifically investigated, especially during the last few years, it should be remembered that it owes its origin to shrewd clinical investigation and its justification to clinical experience.

That the exposure of the body to the rays of the sun produces degrees of pigmentation which vary within very wide limits according to the skin characteristics of different individuals there is no doubt whatever; laymen know this quite well. Whether the benefit to be derived from light treatment in tuberculous and other diseases stands in a definite relationship to the degree of pigmentation that is obtainable is quite another matter. It has been stated by Rollier that this is the case, and that blonds may, accordingly, be expected to respond less rapidly and to a less satisfactory degree than brunettes. It is certainly true that one must proceed much more cautiously with the exposure of blonds, lest they react with a solar dermatitis which is most annoying and necessitates a considerable delay in their response to treatment. On the other hand, any one who has had long experience with heliotherapy will be able to recall the cases of very blond patients who made relatively rapid recoveries and without having attained degrees of pigmentation comparable to those of other patients who have been less fortunate in this respect. I can also cite cases in which the pigmentation became of the deepest and in which it was necessary to record a standstill at this very period. Nay, more, it is possible to point to patients in whom pigmentation was deep, and whose original disease was well advanced in healing, in whom other foci of tuberculous character with definite destructive nature developed under our eyes. This would make it appear that although pigmentation must be regarded as an undeniable response of the organism to the treatment, it is perhaps not to be relied on as an accurate gage of the patient's progress toward recovery. For this we must still look to the condition of the affected part itself as revealed by careful examination and, in the case of bones and joints, to the roentgen-ray appearances. That we demand satisfactory improvement in the general condition of the patient also goes without saying. It seems likely that it will ultimately appear that the alteration of the patient's blood picture is much the most reliable measure of the defense reaction which the patient is making.

1. Gauvain, H.: Lancet 2:10 (July 4) 1925.

THE QUARTZ MERCURY ARC LAMP

It is obviously of great importance to ascertain, if possible, to what particular element the improvement and cure of patients is due that has been observed to take place from heliotherapy. Only in this way can we proceed to improve our technic and, what is equally important, only in this way can we work rationally for a substitute for the sun; a means by which the treatment may be administered without the interference of cloudy weather in summer and the longer periods of sunless days in the winter months. The ascription of the virtues of heliotherapy to the ultraviolet rays of the spectrum has been followed by the development of artificial sources which make available these rays in quantity greater than is the case in natural sunlight. Such are the various forms of quartz mercury arc lamps. That the use of these lamps is followed by reactions on the part of the skin and by definite changes in the chemical composition of the blood has been shown. It is not difficult to produce an erythema, or even a dermatitis, by the use of quartz lamps at a short distance or by long continued exposure. It is also possible to determine, especially in children, that the calcium content of the blood is increased. The statement is also made that pigmentation of the skin takes place. To this statement we must apply ourselves in a critical manner.

Although most of the sources of artificial illumination produce ultraviolet rays to some extent, the fact that such light is usually generated within a bulb of glass renders them unavailable. The ultraviolet rays of the spectrum are most effectively filtered out by ordinary glass. For this reason the sun treatment of disease should not be given with the protection of ordinary window glass in inclement weather, or in the presence of very low temperatures, as might otherwise be highly desirable. Patients who are thus exposed do not acquire the characteristic pigmentation, and it is asserted that they also fail to receive the benefits of local and general character which follow the exposure to the sun's rays without such interference. It has been known for some time that quartz permits the passage of the ultraviolet rays. With the discovery of methods of fusing quartz and thus fashioning bulbs for the generation of electric light, it has become possible to avail ourselves of sources from which ultraviolet rays may be obtained in profusion. The most commonly known of these is the quartz mercury vapor lamp; it is now being distributed commercially in several forms and it is being most extensively used. As the result of careful experiment it has been determined that these lamps produce a radiation very rich in ultraviolet rays. Indeed, it is said that through these lamps we have at our disposal ultraviolet rays in greater quantity than from the sun itself. These lamps having been in use for a number of years, it should be possible to speak of their therapeutic effects in quite definite terms.

Before these are spoken of, it must be emphasized that in the quartz mercury vapor lamp the so-called chemical, or heat, rays, belonging to the red or infra-red part of the spectrum, are almost entirely lacking. If the skin is exposed to the quartz lamp sufficiently, say from ten to fifteen minutes at a distance of about 60 inches, there will soon follow a definite erythema, which is more or less intense according to the length of the exposure. By repetition it may be made quite severe and irritating. By following the technic that is usually recommended, this erythema becomes continuous and the skin acquires a hue unquestionably darker than before. It is spoken of frequently as a

pigmentation—surely not, however, by any one whose experience with insolation has made him acquainted with the deep brown which the sun's rays produce in most skins. After trials extending through two years, embracing a number of patients and carried out with the desire and hope of success, I have not been able to observe the production of true pigmentation in any case by means of the quartz lamp. I have observed patients of others who were supposed to present pigmentation thus produced without being able to verify it in any case. Of perhaps still greater significance is the fact that in patients who had acquired a deep pigmentation from sun exposure, it was not possible by means of the quartz lamp to prevent this pigmentation from fading away. Nor was it possible to maintain the general improvement obtained from the sun exposures, once these were withdrawn, in this manner. In making this statement, I am in agreement with Kisch and others of experience.

We would thus seem entitled to say that ultraviolet rays alone are not to be considered as even a fair substitute for the rays of the sun in surgical tuberculosis. I am aware that in rachitic children exposure to the quartz lamp has been observed to result in definite deposition of lime salts in the bones, as shown by the roentgen ray, and that definite blood changes may be noted. These consist chiefly in the increase of the blood calcium and some increase in the number of erythrocytes. These are not to be compared with the marked accumulation of red cells and the striking increase in hemoglobin percentage regularly to be found in patients that improve as the result of insolation. Most important, however, is the fact that such improvement, of clinical character, cannot be produced in tuberculous patients by means of the quartz lamp. This statement is made unequivocally after trial with two well known types of lamp. It is not possible to show, at present, that ultraviolet rays of artificial production have marked curative value in the treatment of tuberculosis of bones and joints. This statement is not to be interpreted as meaning, however, that the quartz lamp has no therapeutic value, but that its action is superficial, and that it is unsatisfactory as a substitute for the sunlight in the particular class of cases with which we are at present concerned. If this position can be maintained, it would seem most unfortunate to disseminate the impression that the contrary is true and thereby to bring it about that time is lost for patients with deeper forms of surgical tuberculosis by treating them with quartz lamps, in the belief that the more difficult tasks of insolation technic may thereby be substituted without loss of efficiency. Unfortunately, not only is this going on, but the more special orthopedic management of these cases is also being omitted as being unnecessary. This combination of errors must constitute nothing less than calamity for many a patient. It is one that is none the less inevitable because it is not at once apparent, by reason of the insidious and slow character of the advance that is the mark of tuberculous infection of organs more deeply situated.

THE HEAT RAYS

The rejection of the quartz lamp as a satisfactory substitute for the sun is not to be accepted as a gesture of despair, however, nor as an assumption that one is not to be found. If we turn to the work of Kisch, already referred to, we shall find the definite statement that he has found it possible to accomplish results in every way comparable to those obtained at Leysin in the neighborhood of Berlin, at an altitude approximating that of sea level. He goes further with the engaging statement that there is distinct advantage for the tuberculous patient in being cured in an environment not very different from the one in which the disease was acquired, because the tendency to recrudesce, or recur, is thereby greatly diminished. Kisch believes that the most important element of the solar light, in its therapeutic aspect, is to be found in the heat rays: the red and infra-red portion of the spectrum. He believes that their activity stands in direct relationship to the surface temperature produced, and that this must approximate that which is produced by the sun itself. He requires, on this account, surface temperatures varying between 107 and 117 F. (from 42 to 47 C.). These he produces by means of lamps that are especially rich in heat rays; the electric current or the oxyacetylene blast are the means of their activation. He maintains the possibility of producing by this means pigmentation which is comparable to that resulting from insolation both in hue and in intensity. As a protagonist of Bier's views on the curative value of hyperemia, it is not strange that he should ascribe the virtues of his apparatus to this mode of action. He attempts the measurement of the degree of hyperemia that is achieved by the amount of blood escaping from skin punctures made under identical conditions, as nearly as possible.

It is not possible from his description of the apparatus to tell to what extent rays other than the heat rays are produced. This seems to me unfortunate, for the reason that there is no difficulty in producing the same degree of surface heat by means of the rays of the sun shining through ordinary glass, in summer; yet such exposure is not credited with the possibility of producing pigmentation of satisfactory character. In view of past experience it does not seem justifiable to ascribe the virtues of sunlight either to ultraviolet rays or to heat with such predominance as to make either of them an acceptable, practical substitute. Indeed, with the announcement of the discovery of the so-called penetrative rays by Millikan, one wonders whether we know enough about the rays of the sun to make a truly scientific analysis. For the present, at least, it seems necessary to regard sunlight in its normal composition as something we require to imitate, rather than to seek to generate artificially and in profusion in only certain of its known characters. This is a task of no mean difficulty and one that calls for the combined activity of physicist and surgeon and a truly scientific attitude on the part of both. The problem involves not only the search for a particular kind of light but, in order to be practical on a large scale, an installation that will make possible the treatment of a number of patients at one time.

HELIOTHERAPY IN TUBERCULOUS CONDITIONS OF THE JOINTS

Although I have had a deep and active interest in the problems of heliotherapy for a number of years, I have naturally never been able to overlook the fact that my approach to the whole matter has been primarily, perhaps I had better say definitely, that of an orthopedic surgeon. If I have been aware of the shortcomings of our methods in treating bone and joint tuberculosis in the past, I have no less been mindful of that which was accomplished and which was good. I am therefore unwilling that all our earlier conceptions should be cast into the discard, in our enthusiasm for a new method, without good and sufficient reasons, or in an attitude that is uncritical. The emphasis that has properly been laid on the view that these patients are, above all, the

subjects of a disease that should be considered constitutional rather than simply local is one toward which I have always been especially sympathetic. Heliotherapy, which represents the application of the hygienic or indirect method at its apogee, has brought with it the tendency to cast aside many of our previous notions in a manner somewhat relentless and, I may even say, ill considered. I refer particularly to the assumption, now so often made, that the desideratum in recovery should always be the preservation of motion in diseased joints. The origin of this view was, doubtless, the fact that the mechanical methods of fixation that formerly constituted the complete treatment for many surgeons interfered with accessibility of the sun's rays to the diseased part. This is particularly true of plaster dressings. The discarding of apparatus that restrained motion had as its result the preservation of motion in many joints that must otherwise have become stiff after recovery. This has been looked on as something new, but also as something that should always be striven for. I am convinced that this is erroneous in both respects. The earlier American orthopedic surgeons, headed by Davis, Taylor and Sayre, believed that their mechanical apparatus should permit the retention of that amount of motion which was determined by the amount of muscle spasm, and that recovery might very often be expected, in consequence, with the preservation of a considerable arc of motion. "Motion without friction" was their motto. Not seldom the motion in the recovered joint approached closely to the normal. We shall, of course, have to discount the fact that many joints which were so treated and which retained considerable motion were not tuberculous at all. Even today, with the roentgen ray and the refinements of modern diagnosis, we are at times not certain of the tuberculous nature of joint disease. About twenty-five years ago attention was called by several surgeons to the fact that tuberculous joints which were treated by methods permitting motion recovered more slowly than those which had been kept carefully immobilized; that such joints very often recovered with fixation in positions of marked deformity. Furthermore, it was observed that joints which recovered with motion of varying degree were especially prone to recrudescence of the disease, and that the preservation of relatively small amounts of motion was frequently associated with pain and greater disability than if complete ankylosis had resulted. For these reasons, the feeling became widespread that ankylosis in good position represented the best attainable result and offered the best prospect for permanent immunity from further suffering and disability.

The results of continued study under more advantageous conditions have made it necessary, for many of us at least, to recede from this position. There can be no question that numbers of joints, unquestionably tuberculous, have been made to recover with the preservation of motion and sometimes with practically normal motion, and that they have remained well and functionally efficient for very long periods of time. These cases will stand the test of any examination, including the roentgen ray. But it is also true that some of them have been produced without heliotherapy and even before its inception. Heliotherapy is a marvelous addition to our resources, but it works no miracles; it brings to our aid no biologic resources of unprecedented character; it produces no new cartilage in place of that which has been utterly destroyed; it makes the processes of cicatrization no less necessary than they have been hitherto. At the same time, by its benevolent action cicatrization is made more sure and more rapid. When destruction of four or five vertebral bodies and the consequent collapse have brought about a gibbous deformity, we may hope to bring about fusion of the contacting, diseased surfaces more rapidly and more surely than used to be possible without heliotherapy at our disposal. By postural methods we are enabled to improve greatly the appearance and even the function of the spine through corrections above and below the actual seat of disease. It is wrong to permit the dictum to go forth that it is possible, by means of heliotherapy or otherwise, to bring about the regeneration of an amount of bone equal to the bulk of two or three vertebral bodies when they have been destroyed. No such demonstration has yet been made, nor is it likely to be. Yet this would be a minimal requirement in order to maintain the correction of a considerable gibbous deformity even if it could be brought about by nonoperative methods. At the same time, it has been made comparatively easy and certain to circumvent the formation of such deformity and to restore the patient to health that is both vigorous and abiding, provided only that the disease is brought under modern treatment early, and the control persisted in sufficiently long. In this case, not only may we confidently look for a recovery that is much more likely to take place than under the older methods, but we may surely expect healing in a much shorter period than we were accustomed to anticipate in the days of cures that were both more doubtful and were accompanied with impairments of function that we can no longer extenuate.

I cannot conclude this paper without a plea that the virtues of heliotherapy be accepted by the profession, free from a chauvinistic spirit. The unwisdom of such a spirit has been shown only too often in the history of our profession. On the contrary, we are called on to adopt this newer method with enthusiasm but with strict individualization; we are called on to study the patient's condition from the point of view of pathology without rejecting summarily all that has been learned in the experience of the past. We shall do well to hesitate in accepting as dogma that which is in violent opposition to the lessons learned from the scientific study of well observed phenomena by men of broad training and mature judgment. Whether we shall strive for the preservation or extinction of joint motion must not depend on a dictum derived from even a large experience with a single method, or even on the fact of our being able to secure it more easily or uniformly by that method. Now, as before, it must depend on the careful consideration of a number of factors, involving the answer to such questions as:

1. Which joint is involved?
2. To what extent is it involved?
3. What is the patient's general condition; has he pulmonary or other visceral disease?
4. What is the patient's occupation; his social condition and responsibilities?
5. What is his age?
6. To what kind of environment must he be returned after treatment, and to what extent can his behavior be controlled after discharge from active care?

Time does not permit the detailed discussion of these various factors in their reciprocal relations. I can only say that, with a full appreciation of the great advantages of heliotherapy in mind, I should no more hesitate to advise an operation for tuberculosis of the knee in a man of 35 who requires to be returned to wage earning as

soon as possible today than I should have done fifteen years ago. I should feel the same about his tuberculous elbow, provided always that he was free from visceral disease and likely to make a rapid recovery from operation. In the one case I should expect to secure the extinction of motion, and in the other I should hope to preserve it. Both these things I have done often enough to know with fair probability what would be the practical outcome.

Let us, then, accept heliotherapy as a great addition to our resources, particularly in the tuberculous diseases of children, and with a fair recognition of its limitations as well as its virtues. In this way we shall be able to point to a balance on the profit side of the account, of the greatest possible magnitude.

Northwest corner, Seventh and Race streets.

TREATMENT OF HOOKWORM DISEASE IN PREGNANT WOMEN WITH CARBON TETRACHLORIDE *

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Lambert [1] has recently called attention to pregnancy as a "condition in which the dire effects of hookworm disease are dramatized most vividly" and calls attention to the number of deaths annually of mother or child or both as a result of hookworm disease occurring in Fiji. Darling,[2] working in the same region some years ago, found that the average hemoglobin estimation for pregnant women was 15 per cent lower than that for the general population. In Paraguay, I have found a hemoglobin percentage of 64.4 for the general population (2,491 examinations), whereas the average for pregnant women (thirty-nine examinations) is but 51, which represents a loss of 13.4 per cent.

In campaigns for the treatment of hookworm disease in tropical countries, where fecundity begins early and birth control is unknown, the pregnant woman has formed a large part of that group, "not treated for medical reasons," and has not only failed to be freed from her infestation at a time when her vitality was most severely taxed, but has also remained as a dangerous source of reinfestation to the treated community.

Previous to the introduction of carbon tetrachloride, pregnancy was considered as a contraindication to anthelmintic medication, thymol, oil of chenopodium and beta-naphthol all being on the proscribed list.[3] Lambert reported that he had begun treating pregnant women with carbon tetrachloride in June, 1922, and that during the following four months no abortions had occurred following the treatment of some hundreds of women. No details are given as to the length of time these cases were under observation following treatment. Soper [4] more recently reported the treatment of sixty-three women, pregnant from two to eight months, with 2.4 cc. of carbon tetrachloride with no serious immediate consequences, although two abortions were noted, one ten days, the other twelve days, after treatment.

However, under date of May 3, 1924, Dr. F. L. Soper received the following in a personal communication from Dr. N. C. Davis:

> In our experimental work with dogs we made an observation which may be of interest to you; one animal delivered living pups prematurely and another at a rather early stage, apparently influenced by the administration of tetrachloride. Of course the dosage was higher (0.4 to 1.0 cc. per kilogram) than you will ever have occasion to use, and suggested to me the post-treatment study of pregnant women.

During some fifteen months in which more than a hundred thousand of the general Paraguayan population were treated with a combination of carbon tetrachloride and oil of chenopodium by the Campaña Sanitaria, all pregnant women were treated with carbon tetrachloride alone in dosage of 2.4 cc. with simultaneous purge of magnesium sulphate. Most of these cases were treated without antecedent medical examination, and the diagnosis of pregnancy was made in most cases by the patient herself. Of the patients so treated, I have been able to check up closely on 219. A further series of six cases were treated and carefully studied in the maternity hospital in Asunción. All of the cases entering this report were under observation for a minimum period of fifteen days following treatment; sixty-three cases were under observation until after delivery.

TABLE 1.—*Pregnancy*

Month of Pregnancy	No. of Women Treated Once	No. of Women Treated Twice	Followed Until After Delivery	Abortions
1	1	..	..	..
2	21	7	3	1
3	40	16	8	3
4	25	11	4	..
5	31	8	5	1
6	38	12	8	..
7	28	4	9	..
8	32	6	21	..
9	7	2	5	..
Unknown	2	..	..	..
Total.....	225	66	63	5

Table 1 shows the distribution of pregnancy by months among the women receiving one and two treatments; second treatments were administered after an interval of fifteen days. Among the 291 treatments,

TABLE 2.—*Abortions*

Month of Pregnancy In Which Treated	Times Treated	No. of Days Elapsing Between Treatment and Abortion
2	2	10
3	1	8
3	1	20
5	1	12
7	1	29

second treatments being considered as separate cases, but five patients complained of symptoms worthy of note in the forty-eight hours following treatment; four of these vomited and one felt very dizzy. Sixty-three patients were followed through to delivery; in this group five abortions occurred (table 2).

In none of these cases did threatening symptoms develop during the first four days following treatment, and in no case was the abortion attributed to the treatment by the patient. None of the women aborting

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* This report is based on observations made during a cooperative campaign against hookworm disease in the republic of Paraguay, financed by the International Health Board and the National Department of Health of the republic of Paraguay.

1. Lambert, S. M.: Carbon Tetrachloride in the Treatment of Hookworm Disease: Observations on Fifty Thousand Cases, J. A. M. A. **80**: 526-528 (Feb. 24) 1923.
2. Darling, S. T.; Barber, M. A., and Hacker, H. P.: Hookworm and Malaria Research in Malaya, Java and the Fiji Islands, Report of Uncinariasis Commission to the Orient, 1925-1927, pub. 9, International Health Board.
3. Darling, S. T.: Hookworm Disease, in Nelson Loose-Leaf Medicine, 1922, pp. 477-489.
4. Soper, F. L.: Factors Which Should Determine the Selection of an Anthelmintic in a Geographical Area, Am. J. Hyg. **5**: 402-453 (July) 1925.

showed any of the symptoms of carbon tetrachloride poisoning.

Table 3 shows the results of hemoglobin readings made on thirty-nine pregnant women of this group, together with the results of reexaminations of seventeen made at varying periods following treatment.

COMMENT

Data have been presented showing that pregnant women in all months may be safely treated with carbon tetrachloride without the production of dangerous symptoms in the days immediately following treatment. Although five abortions occurred in sixty-three patients followed to term, it is not apparent that there was a causative relationship existing between previous anthelmintic treatment and such abortions.

Pregnancy has been removed as a contraindication to anthelmintic medication in the treatment of more than a hundred thousand of the general population without untoward results. Since the general population was being treated with a mixture of carbon tetrachloride and oil of chenopodium, and since pregnancy was not considered as a contraindication to treatment but only as a condition for modifying treatment, the diagnosis of this condition being left to the patient, it was inevitable that

TABLE 3.—*Average Percentage of Hemoglobin Before and After Treatment*

No. of Cases	Percentage of Hemoglobin Before Treatment	No. of Patients Reexamined After Treatment	Average No. of Days Between Treatment and Reexamination	Results of Reexamination	Gain or Loss
3	30	..	..	..	....
5	40	4	22	54	+14
9	50	6	19	63	+13
12	60	5	21	66	+ 6
8	70	2	17	65	— 5
39	51	17	20	62	0.1

some pregnant women, especially during the earlier months of pregnancy, should be treated with the mixture of the two drugs instead of with carbon tetrachloride alone. This is known to have occurred in some cases (not included in the group reported) and undoubtedly occurred in many others without untoward results. Although I believe that the dosage of 2.4 cc. of carbon tetrachloride is efficient in areas where *Necator americanus* is the offending agent, it may be found inefficient in areas where *Ancylostoma duodenale* predominates. Further observation and trial may prove that it is safe to use a mixture of oil of chenopodium and carbon tetrachloride in such areas in the treatment of pregnant women.

Although the number of cases presented is small and the periods between treatment and reexamination are short, the indication is that the pregnant woman reacts almost immediately to hookworm treatment, as indicated by an increase of hemoglobin.

SUMMARY AND CONCLUSIONS

1. Pregnancy need no longer be considered a contraindication to anthelmintic medication in areas where *Necator americanus* is the offending agent and carbon tetrachloride the anthelmintic used.

2. The use of a mixture of oil of chenopodium and carbon tetrachloride in areas where *Ancylostoma duodenale* predominates may be possible.

3. The pregnant woman reacts favorably almost immediately to anthelmintic medication.

COSMETIC DERMATOLOGY

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The dermatologist must be able to recognize the signs of general disease by their appearance on the cutaneous surface, to differentiate syphilitic from nonsyphilitic disorders in the presence of confusing serologic findings, and properly to diagnose malignant from nonmalignant growths on the skin. Yet the patient seeks other services from the skin specialist. The girl or older woman seeks relief from unsightly superfluous hairs. Many untrained persons offer this service; indeed, unscrupulous ones promise much more than can be given with honesty. The dermatologist may be bored with the idea of removing superfluous hairs, but if he does not do so the patient will seek some one less qualified.

At present, two modalities are available for the successful removal of hairs. The use of the galvanic current from dry batteries or from a generator set, about 3 milliamperes of current with the positive pole to the patient, and the negative pole to the needle (the alliteration of p to p, and n to n, may be noted) long enough so that a white ooze rises at the follicle into which the special needle has been introduced, is one way. The second one is the utilization of the high frequency current, which has no polarity, for the fraction of a second at relatively low amperage, say 200 milliamperes on short circuit across the poles. Each of these methods entails a separate operation: introducing the needle into the follicle. For the galvanic current, this must be absolute. For high frequency currents, this may not be so essential on theoretical grounds, owing to the cone effect of this current. For any one to use the roentgen ray for permanent alopecia or hypertrichosis seems foolhardy. The evidence of the permanent loss of hair means that the follicle cells have been impaired. This inhibition of growing cells is evidence of that overdosage of ray which comes in advance of the unsightly and dangerous, if not actually precancerous, conditions of scaliness, telangiectasia and atrophy. As far as general knowledge today is concerned, no roentgen ray has been found that can cause a permanent loss of hair without, in turn, giving rise to the possibility of the sequelae of overdosage.

Types of moles include the hard, fleshy, sessile mole and the soft, pedunculated mole. The latter seems to be multiple more often than the first variety, although if a person has one mole, he usually has more than one. Unpigmented moles offer no particular difficulty. Depending entirely on the site and size of the unwanted mole, one employs either the actual cautery (much more rarely now than previously), the high frequency current (bipolar, not monopolar) or galvanism. If the latter is utilized, multiple puncture with the needle through the base of the growth from different angles is practiced. High frequency is more successful, if only enough current is used completely to dehydrate the mole at the first and possibly only sitting. The growth may remain for a short time, so that when the blood supply is gone, the mole falls off without an ulcer and the resultant scar is minute, with a tendency to continue to shrink.

With pigmented moles, much more caution is desirable. Observation of unfortunate accidents indicates that it is not possible to tell in advance which cases of

pigmented growths are of the melanoma group. I purposely avoid writing melanocarcinoma or melanosarcoma, as this morphologic point has not been agreed on by pathologists. In the main, the lower down on the body that one finds the pigmented mole, the greater the potentiality of its being a dangerous one. This accounts for the fact that of the thousands and thousands of pigmented moles removed from the face, few result in untoward dissemination of melanomas.

Hairy nevi are important for the cosmetic dermatologist. It is best to remove the hairs prior to trying to do anything with the nevus structure. The hairs are especially resistant to any form of therapy, otherwise. A wide range of possibilities in therapy, including carbon dioxide snow, liquid air, the high frequency current, radium and roentgen ray, are offered for nevi, as a group, and especially for the angiomas. In the spider nevi, with their central puncta and radiating lines, the actual cautery point is ideal, for after the central point has been obliterated, the radiating lines of blood vessels disappear also.

Telangiectasia of rosacea lends itself admirably to galvanic destruction with the fine needle. The high frequency current also is available for this condition.

Depending on their size and location, one treats warts by extirpation with a sharp curet, using local ethyl chloride anesthesia or high frequency, monopolar current, with procaine anesthesia. Since the histologic pathology of the verruca vulgaris discloses it to be more than an excresence above the level of the skin, for in truth the wart is an overgrowth of epithelium in the pegs, one must reach to the corium to eradicate a wart. Verrucae under the nails are difficult to remove satisfactorily. Over articulations, as of the fingers, verrucae give some trouble, also. One should not promise to give complete relief in one sitting with large warts, as a second or even third treatment is desirable to indicate the required depth for the electric modality employed. With the curet, of course, only one operation is required; but the patient must have surgical after-care, because the corium is exposed.

Milium is the name for the tiny, white, cystic appearing excrescences on the face, especially under the eyes. These are considered blemishes by some women, and they are removed by puncturing and pressing out the enclosed material. Or one may give very slight sparking with the high frequency current.

Molluscum contagiosum may be curetted away, or the growth may be hindered by puncture. The high frequency current is ideal for this type of benign tumefaction, even if the lesions are on or near the eyelids or genitals, the common locations.

Comedones not associated with acne vulgaris may be expressed with a comedone remover, under proper precautions. Acne comedones require this physical expression above all other forms of therapy.

Cutaneous horns in the older persons are removed, under local anesthesia, with the surgical polarity of high current electricity. If any suspicion of malignancy is given by the clinical appearance of the base of the horn, wide excision should be practiced, and radium should be applied to the surface.

Scars and hypertrophic scars may be made less unsightly by electrolysis, galvanism being used, or by monopolar high frequency currents. Keloids are perhaps best treated by radium; less successfully, by roentgen ray. Surgery is, of course, contraindicated, as the resultant scar will become even more keloidal than the one so removed.

Neurofibromas and fibromas associated with other skin diseases may be removed with the high frequency current.

Xanthoma of the eyelids may be removed by the galvanic current through needles or by superficial monopolar high frequency currents. They are reported as being amenable to phototherapy.

It seems impossible to give explicit directions as to the use of the modalities. Each manufacturer makes a machine that operates on different currents, such as alternating and direct, with a converter necessary for the latter. The spark gap is an important structure that has not been standardized. The mode of regulation is different for every machine made, and indeed for each of the models of the same machine. For high frequency, either monopolar or bipolar, one may practice first on butcher's meat, or on a piece of dry laundry soap, and, finally, one may make tests for accuracy on the patient and the modality used with gratifying results.

The easy accessibility of the skin has offered an opportunity for quacks and quackery. Persons who would not attempt therapeutic measures for similar pathologic entities within the cavities of the body have no hesitancy when the condition is on the skin. Great and even small cities are flooded with so-called beauty specialists who have no scientific training. Education of the people who form the clients of these so-called beauty specialists must be undertaken, as is so admirably done by *Hygeia*. In the meantime, legitimate physicians should be prepared to undertake some tiring and boring work in cosmetic dermatology.

18 East Eighty-Ninth Street.

INTESTINAL INTOLERANCE FOR CARBOHYDRATE

ASSOCIATED WITH OVERGROWTH OF THE GAS BACILLUS (BACILLUS WELCHII) *

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There is a group of persons, usually, but by no means always, adults of middle age, which presents a clinical picture that is rather vague, and somewhat obscure, of long duration, and of which the significance is often overlooked, or at least not apprehended.

The syndrome is quantitative rather than qualitative; that is, there are no clearly defined, outstanding symptoms. The onset is insidious and gradual, although the patient, usually a woman, may associate its beginning with some unusual dietary event, as a party, or indulgence above the ordinary in unusual foods. This event, however, should it occur, usually marks a culmination rather than a commencement.

The several typical symptoms, which, let it be emphasized again, are quantitative rather than qualitative, are: (1) constipation; (2) fatigue, which is manifested by a marked disproportion between the mental desire for accomplishment and the physical inability of realization; (3) meteorism; (4) precordial or hypochondrial pain, often elicited only on deep pressure; (5) hypotension; (6) intolerance for certain kinds of foods: this is often overlooked by many patients and realized by others only when careful questioning reveals to them its import; and, finally, undue activity of the "gas

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bacillus" or, less commonly, of starch fermenting members of the mucosus group of bacteria in the intestinal tract. There may be diminution of gastric acidity in some cases, but by no means a majority.

Many of these patients, more commonly those having precordial tenderness, awaken between 1 and 3 o'clock in the morning with what has aptly been called a "gnawing" sensation, or even pain. This seems to be associated with an accumulation of gas, either in the cecum or in the region of the sigmoid. Those whose hearty meal is in the middle of the day may have a corresponding advance in this gas symptom.

Patients presenting this syndrome exhibit no demonstrable evidence of organic disease, nor does organic or mental disease seem to develop from these symptoms, even though they persist for several years.

The more common diseases with which this syndrome is confused are: neurosis, especially in women; gastric or duodenal ulcer; gallbladder disease; carcinoma in the sigmoid; mucous colitis, and Herter's [1] "saccharobutyric putrefaction." The diagnosis of neurosis, which is not infrequently made on the absence of definite evidence of constitutional disease combined with the complaint of the patient that physical endurance is below par, is particularly displeasing to those women who are intelligent, alert, and anxious to do far beyond their physical ability. Nor is this diagnosis ordinarily justifiable. A diagnosis of mucous colitis is ordinarily ruled out on the absence of exaggerated nervous phenomena and also the absence of paroxysmal secretion of very tenacious mucus. Herter's saccharobutyric putrefaction, "a form of intestinal derangement characterized by a chronic putrefactive process having its seat mainly in the large intestine and lower ileum, and due to the action of very large numbers of strictly anaerobic butyric acid producing bacteria capable of multiplying by means of spore formation," [2] is more nearly in accord with the facts than any other. It differs, so far as his description indicates, in that putrefactive, rather than fermentative, processes are prominent, and also that diarrhea rather than constipation is a rather common event. It seems not unlikely that Herter's conception of the gas bacillus as a putrefactive organism may have misled him in the interpretation of his syndrome. The gas bacillus is one of the few bacteria that are nearly devoid of proteolytic, or putrefactive, powers. This fact was established, however, long after Herter's fine work on saccharobutyric putrefaction was published, and it seems both logical and appropriate to leave the question of identity between the saccharobutyric syndrome and the one under discussion in abeyance for the present.

The etiology of the intestinal intolerance for carbohydrate is not wholly clear, although in a series of seventy-five cases studied between 1910 and 1925 the gas bacillus or, in a few instances, members of the *Mucosus capsulatus* group of bacteria (starch fermenting types) were obtained in unusual numbers from the intestinal tracts of nearly all. Also, and this seems to be important, it is probable that these organisms, particularly the gas bacillus, are extended upward in the intestinal tract to areas quite beyond their normal habitat. Convincing proof of this is lacking, however. None of the seventy-five cases have come to necropsy, as far as is known. All have shown improvement on a prescribed diet, and most have been lost track of.

It may be stated that the unusual development of gas bacilli or, less commonly, the *Mucosus capsulatus* group, in the intestinal tracts of these patients is not necessarily the underlying cause of the syndrome, although, as will be explained later, the overgrowth of these organisms is nearly, or quite, coextensive with the probable underlying causes. Also, and this is important, dietary measures that restrain the activity of these microbes are of conspicuous therapeutic value.

Quite early in the study of this group of cases, it was surmised that those conditions which permit of an overgrowth of gas bacilli in the intestinal tracts of persons presenting this carbohydrate intolerance would also obtain in the alimentary canals of diabetic patients. Accordingly, a study of the intestinal contents of fifty patients with diabetes was made, the same technic being used. These observations revealed the fact that gas bacilli or, less frequently, members of the *Mucosus capsulatus* group of bacilli were unusually abundant in a large majority of cases. Nor should the observations of Herter,[3] Simonds [4] and, more recently, Moench, Kahn and Torrey,[5] who found gas bacilli unusually numerous in the feces of many, if not indeed of most, patients with pernicious anemia be overlooked. Furthermore, these organisms, especially the gas bacillus, occur as a presumptive cocausative factor in certain sporadic and milk-borne diarrheas, some of which are very severe. Finally, a proportion of patients with secondary anemia are also infested with unusual numbers of gas bacilli in the intestinal tract.

The question very naturally presents itself, Is the gas bacillus the causative factor in these several unlike syndromes? It must be conceded that none of these ailments are contagious; no danger attends those who are in intimate contact with a diabetic patient or a person with pernicious anemia. Nor does available evidence provide any instance of one disease arising from the other, possibly, however, because of their comparative rarity. Finally, gas bacilli are so commonly found in at least modest numbers in the human feces that the organisms may be regarded as normal intestinal parasites, usually acclimatized in the lower intestinal tract.

Whatever the etiologic relationship may be, it is very probable that the unusual luxuriance of growth of gas bacilli in the alimentary canal is due to an alteration of the intestinal environment of such a nature as to permit the organisms to attack carbohydrate unrestrainedly. Furthermore, an important factor, if indeed not a major factor, is the reduction in activity or in numbers, or both, of the normal intestinal lactic acid organisms. In the absence of the lactic acid restraint, the gas bacilli may extend their range of activity very considerably. Much more information is needed, however, before the full result of such an extension of activity can be evaluated.

Returning to the intestinal intolerance for carbohydrate: Whatever the etiology may prove to be, a dietary treatment is available that has been found quite satisfactory, and productive of amelioration of the symptoms. This treatment is based on the fact that the gas bacillus grows rapidly in the absence of intestinal lactic acid organisms of normal activity, and produces considerable amounts of butyric acid, much gas, and some soluble poison. Therefore, to control the gas bacillus, a decided restriction of carbohydrate, some increase in protein, and the administration of well soured milk is to

1. Herter: Bacterial Infections of the Digestive Tract, 1907, p. 291.
2. Herter, C. A.: The Influence of Food and of Epithelial Atrophy on the Manifestations of Saccharobutyric Intestinal Putrefaction, J. A. M. A. **49**: 1965 (Dec. 14), 2077 (Dec. 21) 1907.
3. Herter, C. A.: J. Biol. Chem. **2**: 64, 1906-1907.
4. Simonds: Monograph V, Rockefeller Institute, 1913, p. 73.
5. Moench, L. M.; Kahn, M. C., and Torrey, J. C.: J. Infect. Dis. **37**: 161 (Aug.) 1925.

be insisted on. Soured milk should be given between meals, up to 1½ quarts daily, at appropriate intervals, between 7 a. m. and 10 p. m. preferably. Young children, who sometimes have a similar syndrome in somewhat modified form, naturally take less soured milk. Particular attention must be paid to coffee and tea and preserved fruits. Patients frequently fail to realize that the sugar added to coffee and tea and that in preserved fruits is a rich source of carbohydrate for the gas bacillus.

On such a regimen, enriched cautiously with well toasted bread, grapefruit and gradually other carbohydrate-containing food, in accordance with idiosyncrasies, as intestinal carbohydrate tolerance increases, the patient should make a rather slow, but definite, improvement. Usually the constipation is relieved and the meteorism diminishes. Not infrequently at this state, with the full soured milk regimen, the patient complains of "sour stomach," very often early in the morning. This is to be treated symptomatically, and soured milk forced until the patient is definitely on the road to recovery. This may take some time in exceptional cases.

Thus, one patient, G. M. K., who has been under close observation for sixteen years, and who had a most obstinate case to induce improvement in, required more than two months of this very restricted diet before betterment was apparent. After six months, however, she could commit one dietary indiscretion a week—as a portion of ice cream—without distress. After two years, at least two dietary indiscretions of similar character could be indulged in with impunity. It was noticed that these dietary indiscretions were rather less tolerated about the menstrual period, a peculiarity noticed in other severe cases in women. This is not construed as a phenomenon associated with an internal secretion.

Some persons are experimentalists: they become skeptical about the entire program and try the obvious expedient of indulging rather freely in sweets. Usually, the microbic response is evident within eight hours as acute distress, meteorism and general discomfort. This means that the organisms are not yet restricted to their normal habitat. The patient usually goes back to buttermilk and the low carbohydrate diet with fortitude, and even resignation. Experiments of this sort are really worth while if the patient appraises them correctly.

With recovery, there is an unusual craving for sweets. This is to be met so far as the patient's condition warrants. It will soon be discovered that the kind and amount of carbohydrate that can be tolerated without discomfort is idiosyncratic. Relapses are not infrequent, and recovery is usually rather slow, but definite. The patient may test the completeness of recovery by indulgence in sweets. In the event of a relapse, no great harm is done, and the treatment may be resumed with confidence that it will gradually restrict the intolerance for carbohydrate.

SUMMARY

The syndrome here described is one rather commonly encountered among persons of middle age. There is no outstanding qualitative symptom. The patients are, as Robert Koch once said in another connection, "enjoying a state of rude health," neither conspicuously ill, nor fully well.

The etiology, which seems to be associated with intestinal intolerance for carbohydrates (especially the small intestine), is not at all clear. Gas bacilli, less commonly members of the mucosus group of bacilli of the starch fermenting type, are found in unusual numbers in a great majority of cases. It is not predicated, however, that these organisms are necessarily the primary incitants of the disorder. The hypothesis is advanced, and there seems to be some basis in fact, that one important factor in the overgrowth and probable upward extension of the gas bacillus is a decrease in the number of normal lactic acid bacteria in the small intestine. Adding preformed lactic acid to the intestinal contents by frequent administration of well soured milk tends to correct this deficit.

Whatever the cause may finally prove to be, a regimen containing low carbohydrate, considerable protein and some fats, together with liberal and frequent administration of well soured milk, has proved to be of very definite—almost specific—value in reestablishing normal intestinal conditions.

ELUSIVE ULCER OF THE BLADDER

A FURTHER REPORT BASED ON FORTY-FOUR CASES *

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A great difference of opinion regarding the treatment of elusive ulcer of the bladder still seems to obtain among urologists. The treatment originally recommended by Hunner was a very wide resection of the ulcer-bearing area; but because of the unsatisfactory results, despite its radical nature, fulguration was advocated by various authors. The good qualities of fulguration were soon recognized and the open operation was generally abandoned. After having had a few failures, I gave up the open operation in favor of fulguration.

Hunner has practically discontinued operation on his patients, and directs his attention to the removal of distant foci of infection and the local use of silver nitrate. When these fail, he resorts to the open operation. Others use no form of local treatment at all.

Furniss [1] recently stated that he obtains the best results in those cases in which he fulgurates through the open bladder.

Because of these various opinions regarding the treatment of this condition, it occurred to me that a review of the cases that have been under my observation would not be without interest, especially a comparison of the end-results of those treated by the wide resection and by fulguration.

In all, I have had forty-four cases. For the purpose of checking the end-results, the patients were seen personally; but when they lived out of town, personal contact was of course lacking and reliance had to be placed on answers to letters and a questionnaire.

ETIOLOGY

As regards the etiology of elusive ulcer, nothing definite is known. Hunner believes that distant foci of infection are the most important factors. I have always taken cognizance of his statement and have paid particular attention to the presence or absence of distant foci in examining patients. When they were found, they were cleared up as part of the treatment, as far as this was possible.

A review of these cases showed: chronic infection in the tonsils in 12 cases; abscessed teeth, 8; chronic max-

*Read at the Annual Meeting of the Western Surgical Association, Wichita, Kan., Dec. 18, 1925.

1. Furniss: Personal communication to the author.

illary sinusitis, 2; chronic cholecystitis, 1; chronic otitis media, 1; atrophic rhinitis, 1, and leukorrhea, 1.

In nine cases, tonsillectomy had been performed before the patients came under observation.

In view of the fact that infection of the teeth and of the tonsils is very common and that elusive ulcer is, after all, relatively uncommon, the assumption that they stand in relationship of cause and effect will need more positive proof than we have at the present time.

INCIDENCE IN REGARD TO SEX AND MARRIAGE

It is generally agreed, in consonance with the clinical impressions, that this disease occurs more often in females than in males. This view coincides with my experience. In this series of forty-four cases, forty occurred in females, whereas only four occurred in males. Hunt called attention to the fact of this preponderance of females over males and stated that distant foci of infection were as common in one sex as in the other; hence the inference should be that they play little or no part at all in the causation of the disease.

As far as can be determined, the marital status is a negligible factor. Of the forty women, thirty-one were married. Of the thirty-one married women, twenty had been pregnant one or more times, and in two cases the history was not stated.

AGE

Elusive ulcer of the bladder is essentially a disease of adult life, as was indicated in our series, the largest number of cases occurring in the third, fourth and fifth decades equally. The youngest patient was 20 years of age and the oldest, 75. Five cases occurred between the ages of 20 and 29; twelve, between 30 and 39; eleven, between 40 and 49; ten, between 50 and 59; five, between 60 and 69; one, between 70 and 75.

CLINICAL COURSE

One of the most striking clinical facts is that elusive ulcer of the bladder is essentially a chronic disease. Perhaps the history of the long duration of the symptoms as elicited from the patients is due to the fact that only recently has this condition been recognized, and that we are on the lookout for its presence. And, no doubt, as our attention is focused more and more on its possible occurrence in all cases, the disease will be recognized at a much earlier date and hence be given the benefit of early treatment.

The longest duration of symptoms in this series was twenty years or more, and the shortest, eleven months. Between these two the following durations of symptoms were noted: eleven months, 1 case; one year, 6; one and one-half years, 2; two years, 7; three years, 4; three and one-half years, 1; four years, 2; five years, 1; six years, 3; seven years, 2; eight years, 4; nine years, 1; ten years, 1; eleven years, 1; thirteen years, 1; seventeen years, 1; twenty years, 1; years, many, 1, and not stated, 3.

PREVIOUS OPERATIONS

A rather striking phenomenon is the fact that many of these patients have had one or more operations for the relief of their urinary symptoms and that the operations have failed to give them the desired relief. This has become such an old story that whenever a woman presents herself with a history of bladder distress and a clear urine, and who has had one or more surgical or gynecologic operations for bladder symptoms without relief, one instinctively makes a tentative diagnosis of "elusive ulcer." As a matter of fact, this is a good clinical rule to follow, since this symptom complex, while by no means pathognomonic, prevents one, every now and then, from overlooking a case.

SYMPTOMS

Frequency of urination was present in every instance in our series. The periods between micturition varied somewhat in each individual case and varied in each patient at different times. Thus, many of the women volunteered the information that the frequency of urination was always worse during or just before the period of menstruation.

Associated with frequency of urination there is a certain amount of pain. Pain of varying degree was present in every case. In eight cases pain was in abeyance or absent at the time the patients came under observation, although they had had pain previously.

In practically all our cases, the pain was described as being located in the bladder. Several patients stated that the pain was localized in the neck of the bladder, and in other instances pain was referred to the urethra. Pain was present as follows: in bladder, 19 cases; in neck of bladder, 3; soreness in bladder region, 3; pain in kidney, 3; perineum, 1; urethra, 2; vagina, 1; hip, 2; suprapubic region, 2; penis, 1; labia, 1; legs, 1; abdomen, 1, and pelvis, 1.

Burning on urination was the next symptom most frequently mentioned, being present in twenty-two cases.

Other symptoms that were present were: frequency of urination, 44 cases; pain on urination, 36; pain, 41; burning on urination, 22; urgency of urination, 14; hematuria, 13; loss of weight, 11; nervousness, 11; backache, 9; difficulty in urinating, 6; chills, 5; cloudy urine, 4; tenesmus, 3; fever, 4; retention of urine, 2; nausea and vomiting, 2; incontinence, 1, and scanty urine, 1.

All patients were subjected to roentgen-ray examination for stone. In two cases the presence of stone was demonstrated; in one case a single stone in the ureter, and in another multiple stones in one kidney were found.

A positive Wassermann reaction was lacking in all the cases.

Great care must be exercised in the differential diagnosis lest this condition be confused with tuberculosis. In one case I failed to make a differential diagnosis and operated on a patient with a tuberculosis of the bladder. The patient had a very long convalescence.

URINALYSES

As a general rule, the urine was clear and sparkling, a fact to which Hunner called attention in his several publications on this subject. Careful and repeated examinations of the urine, however, showed the presence of leukocytes in varying amounts, as well as red blood cells. The latter, however, were not always constant, but repeated and careful study of the sediment showed, at one time or another, the presence of red cells in a large number of instances. Leukocytes were found in all cases, and in twenty-four cases red blood cells were reported as being present at one time or another.

Cultures of the bladder urine were made in thirty-six cases. Of these, positive cultures were obtained in seventeen cases. The cultures were sterile in nineteen cases; *B. coli* was found in nine cases and staphylococcus in eight.

In seventeen cases the right ureter was catheterized; cultures of the urine were sterile in fourteen cases; *B. coli* was found in two, and staphylococcus in one.

The left ureter was catheterized in sixteen cases; cultures of the urine were sterile in thirteen cases; staphylococcus was found in two and diphtheroids in one.

TREATMENT

As previously stated in this paper, there still seems to be a great difference of opinion regarding the best form of treatment for this condition. In order to determine just what the results had been this review of forty-four cases was undertaken, and to analyze the results of treatment instituted, the cases, for the purposes of discussion, may be divided into three groups.

In group 1 are cases in which the diagnosis was made but in which no treatment was instituted. In this group were nine cases. The reasons for failure to institute treatment are irrelevant; but, in view of the fact that no treatment whatever was instituted, they automatically drop out of the discussion.

Group 2 consists of cases treated by open operation; that is, wide resection of the ulcer-bearing area. Eleven cases belong to this group. By the term "cured" is meant the result achieved in those cases in which treatment was by open operation, and in which the patient was completely relieved of all urinary distress, chiefly pain in the bladder, and painful and frequent urination. Six patients were completely relieved by surgery and, as far as we have been able to determine, are still free from symptoms. Four of the eleven patients presented themselves subsequently to being operated on or answered a personal communication, in which they stated that they were again suffering from urinary distress similar in character to that for which they had been operated on. One patient has been classified as being improved, for the reason that she suffers only slight urinary distress at times, but does not consider herself absolutely well. She stated in her letter that she felt well enough not to care to have cystoscopy done and the condition of her bladder verified or determined. One of the patients treated surgically and cured by open operation had been treated by fulguration for a long period without relief. Another patient in whom a recurrence was credited to the operation was ultimately cured by fulguration. In a previous report the percentage of cures was given as 75 and the recurrences as 25. As time went on and the cases were kept under observation subsequent to the publication of the report,[2] the percentage of cures has become smaller. The percentage of cures in this group was 50, the recurrences, 40, and the improvements, 10.

Group 3 embraces twenty-four patients who were treated only by fulguration through the cystoscope. Of these, six are cured in the sense that they are free from all types of urinary distress. Sixteen patients were improved, the improvement in the largest number of instances being so great that the patients feel perfectly satisfied with their results and do not wish, nor can they see the need for, further observation or treatment. Some of these patients, however, are skating on rather thin ice. So long as they follow the even tenor of their lives they may be considered well; but the intervention of an acute cold or the grip or a gastro-intestinal upset may result in an immediate recurrence of some of the symptoms. One patient is under treatment and one has been lost sight of, so that data regarding the result in these cases are not available.

2. Kretschmer, H. L.: Elusive Ulcer of the Bladder: A Further Report, Surg., Gynec. & Obst. **35**: 759-765 (Dec.) 1922.

CONCLUSION

At first sight it would appear that fulguration should be the treatment of choice because the percentage of improvements in our series was decidedly large. On the other hand, when it is remembered that some of these patients have an aggravation of their symptoms consequent on such slight provocation as an intercurrent infection or fatigue, it would appear that the ultimate results, as regards cure, are not very gratifying.

ADJUNCTS TO TREATMENT

In several instances patients improved by means of local treatment other than fulguration. In several instances the use of silver nitrate instillations into the bladder gave a good deal of relief, but in no instance was a patient cured.

122 South Michigan Avenue.

ELECTRODIAGNOSIS AND ELECTROTHERAPY IN PARALYSIS FOLLOWING POLIOMYELITIS *

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It is generally agreed among observers of the epidemics of infantile paralysis in the last decade that the proper care of the weakened or paralyzed muscles is of the greatest importance in determining the final degree of function obtainable. Lovett [1] stated that "the greater majority of muscles are weakened rather than paralyzed, and precise, effective and intelligent treatment enlarges greatly the field of possible complete recovery."

My object in this paper is to report the methods of muscle testing and treatment by electricity as employed during the last four years in the department of physical therapy of the Reconstruction Hospital of New York. It has been our experience that the rational and systematic application of electrical stimulation in connection with the accepted orthopedic and general systematic measures will assist greatly in achieving acceptable results in cases even of long standing. In the cases under our observation, the earliest was of six months' and the oldest of eighteen years' standing; the total number of cases observed was forty-two.

After a thorough examination by the clinical staff, patients are referred to the department of physical therapy for the purpose of (1) testing all affected muscles by electricity and putting down in definite figures the extent to which they are affected; (2) making a prognosis of the improvement to be expected, and (3) instituting appropriate treatment in conjunction with the indicated orthopedic measures.

ELECTRODIAGNOSIS

The basis of our diagnostic and prognostic procedure is the comparison of the response of normal and degenerated muscles to electrical stimulation, long known as the "reaction of degeneration," but considerably modified in view of modern research, as described by Adrian [2] and others. Normal muscle with intact nerve

* Read before the Midwinter Session of the American Electrotherapeutic Association, at the New York Academy of Medicine, Jan. 7, 1926.

1. Lovett, R. W.: The Treatment of Infantile Paralysis, Philadelphia, P. Blakiston's Son & Co., 1917, pp. 25, 73-76.

2. Adrian, E. D.: Physiological Basis of Electrical Tests in Peripheral Nerve Injuries, Arch. Radiol. & Electrol. **21**: 379 (May) 1917.

supply will respond with a contraction to a weak current lasting 1/1000 second or less. Muscle degenerated after being separated from its trophic center, by injury or lesion of the nerve or of the trophic center itself, will require currents lasting from 1/100 to 1/10 second. In the ordinary testing outfit, the faradic coil furnishes a current flowing intermittently for about 1/1000 second duration. A normal muscle will remain, therefore, in continuous contraction (tetanus) while the faradic current flows, as the stimuli follow in such rapid sequence that there is no relaxation possible in between them. If, when a large (indifferent), well moistened electrode, about 3 by 5 inches, is applied over the spinal origin of the field of testing, and a small (active) electrode, about 3/4 inch in diameter, is applied over the "motor point" of a muscle that is warmed previously and relaxed, and the two are connected to a faradic coil, a tetanic contraction results at the flow of the current, we know that the muscle has not degenerated, although there may be a degree of weakness or lack of promptness in the response. Total lack of response to faradic stimulation in infantile paralysis indicates that the muscle has degenerated on account of the impairment of its trophic center in the spinal cord.

A degenerated muscle, clinically in the state of flaccid paralysis, as long as there is enough contractile substance left in it, will respond to electrical stimuli of long duration, as furnished by the make and break of the direct (galvanic) current. The resulting contraction is, however, sluggish and weak, in contrast to the brisk contraction of a normal muscle under the same stimulus. The technic of this testing is as follows: The indifferent electrode is applied to the spinal origin of the field of testing—the lumbar region, for instance, in the case of the lower extremities—and connected to the positive pole (anode) of the apparatus, while the active electrode provided with a make and break key is connected to the negative pole (cathode). In all our diagnostic and therapeutic work with galvanism, we always employ the cathode as the active electrode. Modern investigators [3] agree that the time-honored and confusing formula of polar inversion is no longer considered essential, and that an electrical stimulus is at the "make" effective only at the cathode.

The simple galvanic and faradic test as described, if properly charted, furnishes us with a picture of the gross anatomic condition of the weak or paralyzed muscles. We are safe in stating that all muscles showing response to faradism, no matter how weak, are normal or can be made so. Such muscles, as a rule, show voluntary power. Paralyzed muscles responding only to interrupted galvanism may or may not regain normal function, depending on the severity of the lesion and the results of treatment. This simply qualitative method furnishes us, however, with no means of putting down our findings in definite figures that might serve for the purpose of future comparison and allow us to make a more definite prognosis.

The condenser method of testing, which we have used extensively, enables us to overcome this difficulty. Its detailed technic and rationale have been described in a previous paper [4] and by Hirsh.[5] I will state here only that its principle is to apply electrical stimuli of equal strength but of varying duration for the measure of the degree of excitability of the individual muscles, and for the charting of progress in their response. It is less painful than the ordinary faradic and galvanic test, and we find little difficulty in applying it to children 2 or 3 years of age. Response to the condenser method of testing is measured in microfarads, an arbitrary measure of capacity. We found that, in muscles with reactions of normal type, condenser capacities of from 0.01 to 0.08 are required. Such muscles as a rule respond to faradism. Partly degenerated muscles require from 0.09 to 0.90 microfarad and fully degenerated ones 1 or more microfarads.

In quite a number of cases no response can be elicited, even by the highest values of the condenser set, but a contraction can still be accomplished by strong interrupted galvanism, on account of its longer flow and greater volume. We have provided, therefore, an extra column on our testing charts to register this response. In case of very weak muscles in which the testing current "spreads" to the strong antagonists, we apply the galvanic and condenser test by the "bipolar" method. This is carried out by placing two active electrodes of equal size directly over the muscle. The concentration of current thus obtained often elicits a response when the normal monopolar method fails.

PROGNOSIS

On the basis of our electrical testing as described, we can make a prognosis as follows: Muscles responding to faradism or up to 0.09 microfarad of the condenser set will recover voluntary power within a short period; muscles with a response under 0.90 on the condenser set will usually recover under appropriate electrical stimulation and adequate orthopedic support; those with a condenser response of more than 1 microfarad, or with response to strong interrupted galvanism, will require a long course of careful treatment, but will still present a possibility for recovery. Muscles in which on repeated testing there is a total lack of response to any electrical stimulus might show a return of some electrical response, but we very seldom see the return of voluntary power to such muscles. In repeating the muscle tests, according to the severity of the lesion, every four to six weeks, we are able to better our prognosis when marked improvement has been shown from appropriate treatment.

RATIONALE OF ELECTRICAL TREATMENT

The reason that we find, in a number of orthopedic writings, an indifferent if not decidedly antagonistic attitude to electrical treatment in cases of infantile paralysis is twofold: 1. The writers have never received any instruction in the physiologic basis and the proper methods of electrotherapy, this subject having been totally neglected in the medical curriculum. 2. Whatever experience they may have had of its use is derived from "treatments badly directed, badly applied by unqualified persons, from treatments of insufficient intensity and duration, and applied with defective instruments." [6]

Lovett [1] says: "The well being and efficacy of a muscle is largely dependent on the performance by it of a certain number of active contractions. When a muscle is inactive for any length of time, it atrophies. It is an accepted physiological principle that the exercise of the normal functions of a muscle is the best

3. Cumberbatch, E. P.: Essentials of Medical Electricity, ed. 5, St. Louis, C. V. Mosby Company, 1924, pp. 180-189; Turrell, W. J.: The Principles of Electrotherapy and Their Practical Application, London, Henry Frowde and Hodder & Stoughton, 1922, pp. 127, 170-175.

4. Kovacs, Richard: Electrodiagnosis of Peripheral Nerve Lesions and Infantile Paralysis, Am. J. Electroth. & Radiol. **42**, no. 2, November, 1924.

5. Hirsh, A. B.: Some Recent Changes in Muscle and Nerve Testing, Am. J. Electroth. & Radiol. **38**: 61 (Feb.) 1920.

6. Bergonié, Jean: Les progrès du traitment électrique de la paralysie infantile, Arch. d'electricité méd., Feb. 10, 1912.

means of increasing its size and strength. The same rule applies to the partially paralyzed muscle." Tilney [7] says: "Muscle prevented from performing its natural function of contraction tends to revert to noncontractile connective tissue type. It remains for us to supply the deficient function of contraction by whatever means we possess. Electricity is one of these means."

Massage and muscle training are the two universally recommended means of restoring muscles affected by infantile paralysis. Do they preserve the function of contraction? Of massage, Lovett says: "It can only be expected of proper massage that it will improve locally muscular tone and nutrition and antagonize muscular atrophy and nothing more. It will not restore muscular power." Stookey [8] says: "Modern experimental evidence proves that massage is only of slight benefit in preventing atrophy of paralyzed muscles." In paralysis, according to Mennell [9] only the slightest form of massage is indicated because, owing to the atrophy of the paralyzed muscle, pressure may be transmitted to the blood vessels, causing paralytic dilatation; thus, heavy massage will defeat the end sought. In our own cases of paralysis, we use massage only as an adjunct for the further improvement of local circulation; very light massage for from five to ten minutes at a time to one extremity is all that is indicated.

Active exercise as accomplished by muscle training is undoubtedly the most natural form of reeducation of weak muscles. Its disadvantage is, first, that only older children can be trained. Lovett recommends their beginning at the age of 3, and Ogilvy [10] at 6. Tilney [7] says: "Muscle reeducation to be most efficient requires an elaborate system of accessories and a well trained staff of instructors. With one conspicuous exception, no such efficiency has yet been attained." If the muscles are without any power, the passive performance of the motion, as recommended, is undoubtedly inferior to active contraction by electricity. Muscle training can and should be applied systematically alongside the electrical treatment, and the latter should be abandoned in its favor as soon as there is a return of active muscular power.

Electrical muscle stimulation, as seen, can cause movements similar to the normal ones even in degenerated muscles, and can thus preserve the functional properties of the muscle until the normal nerve impulse returns to carry on the work. Muscle training undoubtedly helps to lead the impulses of the brain around the destroyed centers by new paths to the muscle. Souttar and Twining [11] say: "Were we limited to one method of treatment and had nothing but the muscle to consider, we should ourselves prefer electrical stimulation to all other methods." If the muscle is not fully paralyzed, but is only weak, the causing of contractions not only prevents the atrophy of the paralyzed muscle bundles, but also exercises and strengthens the nonparalyzed part and thus enables it to do compensating work.

Treatment by electricity should not interfere with indicated orthopedic measures, either operative or supportive, but rather should serve as an adjunct, as in our own work.

7. Tilney, Frederick: The Present Management of the Poliomyelitis Epidemic in New York City, New York M. J. **104**: 1221 (Dec. 23) 1916.
8. Stookey, B. P.: Surgical and Mechanical Treatment of Peripheral Nerves, Philadelphia, W. B. Saunders Company, 1922, p. 191.
9. Mennell, J. B.: Massage, Its Principles and Practice, London, J. H. A. Churchill, 1920, p. 324.
10. Ogilvy, Charles: Poliomyelitis: New Developments in the After-Care and Treatment, J. A. M. A. **71**: 1730 (Nov. 23) 1918.
11. Souttar and Twining: Injuries of the Peripheral Nerves, New York, William Wood & Co., 1922, pp. 25-29.

TECHNIC OF ELECTRICAL TREATMENT

Radiant light reflected from a carbon filament lamp should be used as an introductory treatment for at least fifteen minutes in all cases to promote local nutrition and to improve skin conductivity and muscular response by its warming and relaxing action. In some cases diathermy may be indicated along the length of the extremity so as to warm the deeper parts.

Preceding and during electrical treatment, the extremity should be placed so that the paralyzed muscles are not stretched by their powerful antagonists; if necessary, even a splint has to be used.

For electrical stimulation on the basis of our preliminary muscle testing, we select the electrical current that will evoke response in the gentlest way. We are well aware of the danger of overtiring a muscle, and therefore we never use more current strength than one that will produce just a flicker in the tendon.

Faradism.—If the muscle is only weak, the faradic current will be used, as it imparts impulses that are the nearest to the impulse of normal nerve stimulation. Experiments of Debadet have proved that rhythmically varied faradic currents caused more than twice the growth in muscles induced by galvanism. In applying faradism, we use either the Bristow coil or a high tension faradic coil, with an arrangement whereby the current can be made surging. The Bristow coil furnishes a low voltage, relatively painless current, the strength of which can be varied comfortably by sliding a soft iron core in and out of the primary coil. In the high tension faradic coil, the tension of the current will determine its penetrating or stimulating quality; by selecting different wire lengths of the secondary spiral, we can regulate the tension; at the same time the current can be made surging and thus much more pleasant and effective. The straight faradic current causes tetanic muscle contraction and should never be used for treatment. The technic in each case is to apply an indifferent electrode over the spine and a small active electrode, from 1 to 1½ inches in diameter, over the individual muscles, causing from six to ten contractions of each at the start, increasing the number of contractions gradually until a maximum of two or three minutes' treatment to an individual muscle or fifteen minutes to an entire extremity is reached. Treatment is usually given first daily and then three times a week.

Sinusoidal Current.—In muscles lacking faradic response, the slow (galvanic) sinusoidal is the current of choice. It produces a stimulus of long duration and slowing surging quality to which the paralyzed muscles respond very gently and painlessly. We are always using the method of monopolar muscular stimulation; i. e., a large indifferent electrode over the cervical or lumbar spine or at any place proximal to the paralyzed part, and a small active electrode over the individual muscles. In all these cases the normal motor point is displaced distally (toward the tendon) and to save time in subsequent treatments it is advisable to mark with an indelible pencil the most effective point of stimulation for each muscle. According to the response, each muscle is made to contract from half a dozen to a dozen times, the number of contractions being increased until from thirty to forty a minute is reached and a maximum treatment of from two to three minutes to an individual muscle or fifteen minutes to an entire extremity is given.

The use of the interrupted galvanic current for the eliciting of contractions gave rise to considerable controversy in the past. As long as we believe that it is

beneficial to cause contractions in degenerated muscles, interrupted galvanism will supply a need in cases that do not respond to the sinusoidal current. The difference of action is based on the physics of the two currents and the stage of degeneration of the muscles. To obtain a muscular contraction (based at the "make" of the current on the stimulus exerted by the sudden concentration of hydrogen ions under the cathode), the current must have (1) a certain minimal strength and (2) a certain minimal duration. The gradually increasing stimulus of the slow sinusoidal current is often not sufficient in advanced degeneration of muscles to cause contraction; it does not last long enough at a certain voltage. Hand interruption prolongs the duration of current flow, and at the same time the current strength can be easily increased to the limit necessary. This explains why interrupted galvanism with its longer flow and higher voltage causes response in cases in which the sinusoidal current does not. We use interrupted galvanism with the same technic as the sinusoidal current, the active electrode being attached to the negative pole of the apparatus.

It is interesting to note in many cases that at first it is necessary to use a larger amount of current to cause contractions, and after the first one or two contractions we can elicit response with markedly less current. One can aptly express it by stating that the muscle needs "waking up" at first, and then responds more briskly. We will also find in a number of cases that, after a few treatments with interrupted galvanism, response can be elicited by the slow sinusoidal galvanic current. In such cases, naturally, the modality of the treatment is changed to sinusoidal. In most types of modern apparatus the sinusoidal wave can be interrupted mechanically, thus furnishing an extra stimulus on the crest of the sinusoidal wave, a very advantageous combination when the muscles are still very weak.

The extensive use of sinusoidal currents in the war and during the reconstruction period has resulted in a number of machines producing two main variations of currents: (1) a true sinusoidal derived from a galvanic (constant or direct current) and (2) a so-called sinusoidal derived from the alternating current (rapid alternating waves). There is a widely open field for the study of the best method of muscle stimulation based on the physiologic contraction times of muscles, but as a general rule it can be stated that an electrical current used for producing muscular contractions should be applied in rhythmic surges, in unison with the physiologic cycles of muscle movements. The rate of contraction of the muscles of arms and legs is about thirty to forty a minute.

As systematic electrical stimulation is continued, we find that the atrophy gradually disappears and the muscle response improves. It is an interesting experience to note the sudden improvement in some of the old cases of infantile paralysis soon after proper treatment has been instituted. "It is almost as though there were some latent recovery lurking in the muscle, needing only the electrical stimulus to reveal its presence." [12]

TABLE 1.—*Muscle and Nerve Test in Case 1*

		Aug. 29, 1922			March 3, 1923			Nov. 27, 1923		
		Faradic	Condenser Microfarad	Galvanic	Faradic	Condenser Microfarad	Galvanic	Faradic	Condenser Microfarad	Galvanic
N. femoralis										
Sartorius	Right	Good	0.05	.....	Normal	0.02	.....	Normal	0.02	.....
	Left	No	0.09	.....	Good	0.03	.....	Normal	0.03	.....
Rectus femoris	Right	Good	0.06	.....	Good	0.04	.....	Normal	0.03	.....
	Left	No	0.08	.....	Good	0.05	.....	Good	0.04	.....
Vastus internus	Right	Normal	0.02	.....	Normal	0.03	.....	Normal	0.02	.....
	Left	Good	0.05	.....	Good	0.05	.....	Good	0.04	.....
Vastus externus	Right	Normal	0.02	.....	Normal	0.02	.....	Normal	0.02	.....
	Left	No	No	Poor	Poor	0.06	.....	Good	0.05	.....
Pectineus	Right	Good	0.05	.....	Good	0.04	.....	Normal	0.03	.....
	Left	Weak	0.09	.....	Weak	0.07	.....	Normal	0.03	.....
Adductor longus	Right	Normal	0.03	.....	Normal	0.03	.....	Normal	0.02	.....
	Left	Weak	0.08	.....	Good	0.06	.....	Good	0.05	.....
N. sciaticus										
Gluteus maximus	Right	Good	0.05	.....	Normal	0.04	.....	Normal	0.03	.....
	Left	No	0.25	.....	No	No	Poor	No	No	?
Gluteus medius	Right	Good	0.05	.....	Good	0.04	.....	Normal	0.03	.....
	Left	No	0.25	.....	No	No	?	No	No	.....
Biceps femoris	Right	Good	0.05	.....	Good	0.05	.....	Good	0.05	.....
	Left	No	0.15	.....	Weak	0.12	.....	Weak	0.08	.....
Semitendinosus	Right	Good	0.06	.....	Good	0.05	.....	Good	0.05	.....
	Left	No	0.15	.....	Weak	0.14	.....	Good	0.05	.....
Semimembranosus	Right	Good	0.06	.....	Good	0.05	.....	Good	0.05	.....
	Left	No	0.20	.....	Weak	0.12	.....	Good	0.05	.....
N. peroneus (external popliteal)										
N. peroneus profundus										
Tibialis anterior	Right	Good	0.04	.....	No	?	.....	No	No	No
	Left	Normal	0.03	.....	Normal	0.03	.....	Good	0.05	.....
Extensor longus digitorum	Right	Good	0.04	.....	Normal	0.02	.....	Normal	0.02	.....
	Left	Normal	0.03	.....	Normal	0.04	.....	Normal	0.03	.....
Extensor longus hallucis	Right	Good	0.04	.....	Normal	0.04	.....	Normal	0.02	.....
	Left	Normal	0.02	.....	Normal	0.02	.....	Normal	0.02	.....
Extensor brevis digitorum	Right	.....	....	.....	.....	....	.....	Normal	0.02	.....
	Left	.....	....	.....	.....	....	.....	Normal	0.03	.....
N. peroneus superficialis										
Peroneus longus	Right	Good	0.06	.....	Good	0.06	.....	Normal	0.04	.....
	Left	Good	0.04	.....	Good	0.04	.....	Normal	0.03	.....
Peroneus brevis	Right	Good	0.06	.....	Good	0.05	.....	Normal	0.04	.....
	Left	Good	0.05	.....	Good	0.04	.....	Normal	0.04	.....
N. tibialis (internal popliteal)										
Gastrocnemius	Right	Good	0.04	.....	Normal	0.03	.....	Normal	0.02	.....
	Left	Good	0.05	.....	Good	0.05	.....	Normal	0.04	.....
Soleus	Right	Good	0.04	.....	Good	0.04	.....	Normal	0.02	.....
	Left	Good	0.05	.....	Good	0.04	.....	Good	0.04	.....
Flexor longus digitorum	Right	No	?	Poor	Normal	0.03	.....	Normal	0.03	.....
	Left	Good	0.05	.....	Normal	0.03	.....	Normal	0.03	.....
Flexor hallucis longus	Right	Good	0.06	.....	Normal	0.03	.....	Normal	0.03	.....
	Left	Good	0.06	.....	Normal	0.03	.....	Normal	0.03	.....
Tibialis posterior	Right	.....	....	.....	Normal	0.03	.....	.....	....	.....

12. Turrell (footnote 3, second reference).

I wish to emphasize the following important points in giving electrical stimulation in cases of infantile paralysis:

1. I do not believe that treatment *en masse,* i. e., by applying one electrode up near the spine, the other on the sole of the foot, and thus putting the same amount of current through all muscles, whether paralyzed or not, is as beneficial as the method of individual muscle stimulation over each motor point as described. I feel that too much strengthening of the healthy antagonists and too little strengthening of the muscles needing individual attention is thus accomplished. In cases, however, in which a whole extremity is nearly evenly affected, such a procedure might be advisable. Binding an electrode over a motor point and having the current run through for varying lengths of time is bad practice.

2. I am well aware of the danger of overexercising a muscle by electricity. I do not believe that more than a flicker of the tendon is necessary to prove a successful contraction in a paralyzed muscle. This flicker may not even be visible; it is enough when it is palpable to the trained finger at the insertion of the tendon. From three to ten contractions of each muscle are ample at the start and the increase to the maximum number is effected gradually. A careful operator will very quickly notice that a larger amount of current is needed in case of a muscle that has been overtired previously, provided all other conditions are equal.

3. To give electrical muscle stimulation efficiently, it is therefore necessary to emphasize intelligent personnel, trained not only in the application of electricity but also in anatomy and the mechanical problems of the skeletal muscles. In order to chart progress, a condenser set test is advisable every four to six weeks.

4. Muscle training—the reeducation of normal muscular function—should go on simultaneously with electrical stimulation. When there is an indication of the return of voluntary motion in one or more of the paralyzed muscles, which usually precedes the return of the faradic response, one has to be very careful not to replace the gentle action of the sinusoidal current too quickly by the faradic current. A muscle just recovering is very sensitive toward any more exhaustive exercise with faradism, and it can be easily tired out so that it will take several days to elicit faradic response again.

I am well aware that the average limit of spontaneous maximum recovery in infantile paralysis is six months; but improvements may occur even after two or three years. I realize also that the number of cases observed (forty-two) is comparatively small alongside the large series presented by orthopedic observers. I trust, however, that the simple and rational diagnostic and therapeutic methods presented will encourage their employment by competent workers in other institutions.

TABLE 2.—*Muscle and Nerve Test in Case 2*

		Aug. 30, 1923			Feb. 7, 1924			Nov. 17, 1925		
		Faradic	Condenser Microfarad	Galvanic	Faradic	Condenser Microfarad	Galvanic	Faradic	Condenser Microfarad	Galvanic
N. femoralis										
Sartorius	Right	No	No	Poor	No	No	Poor	?	1.00	.....
	Left	No	No	Poor	No	No	Poor	No	No	Poor
Rectus femoris	Right	No	No	Poor	No	No	Poor	?	0.40	.....
	Left	No	No	Poor	No	No	Poor	Weak	0.20	.....
Vastus internus	Right	No	No	Poor	No	No	Poor	No	0.40	.....
	Left	No	No	Poor	No	No	Poor	Weak	0.15	.....
Vastus externus	Right	No	No	Poor	No	No	Poor	No	0.40	.....
	Left	No	No	Poor	No	No	Poor	Weak	0.20	.....
Pectineus	Right	No	No	Poor	No	No	Poor	No	No	Poor
	Left	No	No	Poor	No	No	Poor	No	No	Poor
Adductor longus	Right	No	No	No	No	No	?	No	No	Poor
	Left	No	No	No	No	No	?	No	No	Poor
N. sciaticus										
Gluteus maximus	Right	No	No	Poor	No	0.80	.....	Poor	0.70	.....
	Left	No	No	Poor	Weak	0.30	.....	Weak	0.20	.....
Gluteus medius	Right	No	No	?	No	?	Poor	Poor	0.50	.....
	Left	No	No	Poor	Weak	?	.....	Weak	0.30	.....
Biceps femoris	Right	No	No	Poor	No	No	Poor	Poor	1.30	.....
	Left	No	No	Poor	No	No	Poor	Weak	0.60	.....
Semitendinosus	Right	No	No	Poor	No	No	Poor	No	No	Poor
	Left	No	No	Poor	No	No	Poor	Poor	? No	Poor
Semimembranosus	Right	No	No	Poor	No	No	Poor	No	No	Poor
	Left	No	No	Poor	No	No	Poor	Poor	?	Poor
N. peroneus (external popliteal)										
N. peroneus profundus										
Tibialis anterior	Right	No	No	Poor	No	No	Poor	No	No	Poor
	Left	Normal	0.02	.....	Normal	0.03	.....	Normal	0.02	.....
Extensor longus digitorum	Right	No	No	Poor	No	No	Poor	No	No	Poor
	Left	Normal	0.02	.....	Normal	0.03	.....	Normal	0.02	.....
Extensor longus hallucis	Right	No	No	Poor	No	No	Poor	No	1.50	.....
	Left	Normal	0.02	.....	Normal	0.04	.....	Normal	0.02	.....
Extensor brevis digitorum	Right	No	No	Poor	No	No	Poor	No	1.50	.....
	Left	Normal	0.02	.....	Normal	0.03	.....	Normal	0.02	.....
N. peroneus superficialis										
Peroneus longus	Right	No	No	Poor	No	No	Poor	No	No	.....
	Left	No	No	Poor	Weak	0.08	.....	Good	0.08	.....
Peroneus brevis	Right	No	No	Poor	No	No	Poor	No	No	Poor
	Left	No	No	Poor	Weak	0.07	.....	Weak	0.07	.....
N. tibialis (internal popliteal)										
Gastrocnemius	Right	No	No	Poor	No	No	Poor	No	No	Poor
	Left	No	No	Poor	No	No	Poor	Good	0.06	.....
Soleus	Right	No	No	Poor	No	No	Poor	No	No	Poor
	Left	No	No	Poor	No	No	Poor	Good	0.04	.....
Flexor longus digitorum	Right	No	No	Poor	No	No	Poor	No	No	.....
	Left	No	No	Poor	Good	0.04	Poor	Good	0.03	.....
Flexor hallucis longus	Right	No	No	Poor	No	No	Poor	No	No	.....
	Left	No	No	Poor	Good	0.04	Poor	Good	0.03	.....
Tibialis posterior	Right	No	No	Poor	No	....	Poor	.....	....	.....
	Left	No	No	Poor	No	....	Poor	.....	....	.....

CASE 1.—*Paralysis of left lower extremity after poliomyelitis (five years' standing).* L. N., a boy, aged 6 years, admitted, Jan. 6, 1922, had had poliomyelitis at the age of 10 months. He had had two transplanting operations (peroneal brevis into tibialis anticus) at the age of 3½, followed for one year by massage. On admittance, the child wore braces on both legs and possessed marked muscular atrophy

of the left leg. Electrical testing showed no faradic, weak condenser response of the quadriceps, glutei, biceps, hamstrings and flexor longus digitorum. Clinically, there was no extension in the knee, and there was a lack of power in the calf muscles. The patient received radiant light, very gentle massage and the sinusoidal current. By Nov. 27, 1923, the quadriceps, sartorius, adductor longus, semitendinosus and semimembranosus and flexor longus digitorum showed normal electrical and clinical response. The calf and peroneal muscles had recovered from weak normal to fully normal response. On the other hand, the peroneus brevis tendon, which had been transplanted into the tibialis anticus, had lost all dorsal flexor action, compelling the child to continue wearing a brace on the leg.

CASE 2.—*Paralysis of both lower extremities after poliomyelitis (one year's standing).* M. A., a girl, aged 3 years, had had poliomyelitis in 1922, at the age of 2. First examination, Aug. 30, 1923, one year after her original attack, showed almost total paralysis of both lower extremities; the tibialis anterior and the extensors of the left leg were the only muscles showing any active power. Electrically, there was normal response of these muscles and poor response to galvanism of all other muscles of both lower extremities, except the adductors on both sides, which showed no response at all, and the right gluteal muscles, in which there was only a doubtful response. Treatment was commenced two months later, and consisted of radiant light and heat, the slow (galvanic) sinusoidal current and very gentle massage. Graduated muscle exercises were begun as soon as the child was able to comprehend them and carry them out. Treatment was interrupted because of absence from the city for a few months in 1924, but otherwise it continued up to the present time. The last electrical muscle test, taken, Nov. 17, 1925, showed very considerable progress in both lower extremities. The left quadriceps muscle showed the return of faradic response and a weak normal response on the condenser set; there was also measurable response of the right quadriceps muscle. The gluteal muscles on the left showed weak normal response, while the right gluteals and hamstrings recovered faradic response. All muscles of the left leg showed practically normal response, and there was a return of measurable response in the right extensor hallucis longus and the extensor digitorum brevis. Clinically, there was active power in the left quadriceps as well as in all the muscles of the left leg, and a corresponding improvement in the bulk and tone of the muscles and the general strength of the patient.

CASE 3.—*Paralysis of both lower extremities after poliomyelitis (eighteen years' standing).* S. O., a woman, aged 21, had her original attack eighteen years previously, at the age of 3. She had received electrical treatment, consisting of violet rays (monopolar high frequency current from the Oudin terminal) for seven years by the late Dr. Abraham Jacobi, and orthopedic institutional care ever since. On admission, July 17, 1925, she showed normal development of the muscles above the knees, except the hamstring muscles, and a total atrophy of all structures below the knee except the left calf muscles, which showed some weak development. Electrically, there was the normal type of response of most muscles on the anterior surface of the thighs and of the glutei, with pronounced weakness on the left side; there was only doubtful response of the right adductor longus and no response at all of the left pectineus and adductor and of the hamstrings on both sides. There was a total lack of any response of the muscles of both legs, with the exception of the right peroneals, which showed a very weak response to strong interrupted galvanism, and of the right calf muscles and the dorsal flexors, which showed a weak normal type of response, as well as the right plantar flexors. Treatment, consisting of radiant light and heat, sinusoidal current and muscle training, was commenced, November 10, and was given three times a week. At the

TABLE 3.—*Muscle and Nerve Test in Case 3*

		July 17, 1925			Nov. 10, 1925			Dec. 30, 1925		
		Faradic	Condenser Microfarad	Galvanic	Faradic	Condenser Microfarad	Galvanic	Faradic	Condenser Microfarad	Galvanic
N. femoralis										
Sartorius	Right	Good	0.05	.....	Good	0.05	.....	Good	0.05	.....
	Left	Weak	?	Poor	?	0.50	.....	Weak	0.30	.....
Rectus femoris	Right	Good	0.04	.....	Good	0.05	.....	Good	0.05	.....
	Left	Weak	0.09	.....	Weak	0.09	.....	Good	0.06	.....
Vastus internus	Right	Good	0.04	.....	Good	0.09	.....	Good	0.04	.....
	Left	Weak	0.09	.....	Weak	0.11	.....	Weak	0.10	.....
Vastus externus	Right	Good	0.07	.....	Good	0.07	.....	Good	0.07	.....
	Left	Weak	0.09	.....	Weak	0.12	.....	Good	0.07	.....
Pectineus	Right	Weak	0.12	.....	Weak	0.13	.....	Weak	0.13	.....
	Left	No	No	No	No	No	No	No	No	Poor
Adductor longus	Right	?	No	?	Weak	0.12	.....	Weak	0.13	.....
	Left	No	No	No	No	No	No	No	No	No
N. sciaticus										
Gluteus maximus	Right	Good	0.06	.....	Good	0.06	.....	Normal	0.02	.....
	Left	Weak	0.12	.....	Weak	0.15	.....	Good	0.08	.....
Gluteus medius	Right	Good	0.06	.....	Good	0.06	.....	Good	0.05	.....
	Left	Weak	0.12	.....	Weak	0.15	.....	Weak	0.15	.....
Biceps femoris	Right	No	No	No	No	0.50	.....	No	?	Poor
	Left	No	No	No	No	No	No	No	No	No
Semitendinosus	Right	No	No	No	No	0.60	.....	Weak	0.15	.....
	Left	No	No	No	No	No	No	No	No	No
Semimembranosus	Right	No	No	No	No	0.60	.....	Weak	0.20	.....
	Left	No	No	No	No	No	No	No	No	No
N. peroneus (external popliteal)										
N. peroneus profundus										
Tibialis anterior	Right	No	No	No	No	No	No	No	No	No
	Left	No	No	No	No	No	No	No	No	No
Extensor longus digitorum	Right	No	No	No	No	No	No	No	No	No
	Left	No	No	No	No	No	No	No	No	No
Extensor longus hallucis	Right	No	No	No	No	No	No	No	No	No
	Left	No	No	No	No	No	No	No	No	No
Extensor brevis digitorum	Right	No	No	No	No	No	No	No	No	No
	Left	No	No	No	No	No	No	No	No	No
N. peroneus superficialis										
Peroneus longus	Right	No	No	Very weak	No	No	Poor	No	No	Poor
	Left	No	No	No	No	No	No	No	No	.....
Peroneus brevis	Right	No	No	Very weak	No	No	Poor	No	No	Poor
	Left	No	No	No	No	No	No	No	No	.....
N. tibialis (internal popliteal)										
Gastrocnemius	Right	No	No	No	No	No	No	Weak	0.20	.....
	Left	Weak	0.07	.....	Weak	0.13	.....	Weak	0.25	.....
Soleus	Right	No	No	No	No	No	No	No	0.23	Poor
	Left	Weak	0.10	.....	Weak	0.13	.....	Weak	0.30	.....
Flexor longus digitorum	Right	Good	0.06	.....	Good	0.06	.....	Good	0.06	.....
	Left	Good	0.06	.....	Good	0.06	.....	Good	0.06	.....
Flexor hallucis longus	Right	Good	0.05	.....	Good	0.05	.....	Good	0.13	.....
	Left	Good	0.06	.....	Good	0.06	.....	Good	0.14	.....

first follow-up muscle test, December 30, four weeks after the beginning of treatment, the patient showed a return of active power in the right hamstrings and adductors and gastrocnemius. Electrical testing showed a weak faradic response of these muscles, as well as a measurable improvement of the response to the condenser set of these as well as of the left sartorius, proving that, by well directed electrical stimulation, latent power can be developed even as late as eighteen years.

For the charting of electrical muscle and nerve tests, we have worked out three standard charts: one for the lower extremity, one for all muscles about the shoulder and for the musculospiral distribution, and one for the ulnar and median distribution. The charting and treatment of paralysis following peripheral nerve lesions is done on the same basic principles.

CONCLUSIONS

1. Electrical currents, simulating the natural physiologic impulse, are most valuable in restoring the power of paralyzed muscles following poliomyelitis. Rhythmically varying currents of low tension are the most effective.
2. No electrical treatment should be instituted in any case without a preliminary accurate electrical muscle test.
3. No case is of too long standing for the institution of proper electrotherapy. The earlier it is begun after the acute stage, the more satisfactory will be the results. Definite technic and persistency are the keynote of success.

223 East Sixty-Eighth Street.

SKIN REACTIONS WITH FILTRATE OF KOCH STRAIN OF BACILLUS TUBERCULOSIS *

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AND
CLARENCE C. SAELHOF, M.D.
CHICAGO

The so-called Koch strain of the tubercle bacillus is an avirulent culture which gives a profuse growth overnight on the ordinary solid and fluid nutrient mediums. It was thought well to study whether the growth of the bacillus in broth might produce a substance that, injected intracutaneously, would give a skin reaction. The strain used was obtained from Dr. F. G. Novy in Ann Arbor, Mich., who brought it from Dr. Koch's laboratory in 1888. It was originally a virulent strain.

Transplants from solid medium were made into nutrient broth containing 0.1 per cent dextrose and 0.1 per cent dibasic sodium phosphate in place of the sodium chloride of the ordinary broth. A four day growth was passed through Berkefeld N filters, and the filtrate diluted with physiologic sodium chloride solution for skin tests. Skin reactions were obtained in normal adult persons in dilutions up to 1 : 50 injected intracutaneously in a quantity of 0.1 cc. Tuberculin syringes were used and a 27 gage needle. The injections were made in the forearm as a rule, but in persons with a thin skin the arm was satisfactory.

Within twenty-four hours the majority of apparently normal adult persons developed an area of redness at the site of injection, which varied from 1 to 3 cm. in diameter and reached its maximum in from twenty-four to forty-eight hours; after fading, there frequently is left a pigment spot which persists for several days and in some instances for several weeks. Such reactions are classified as positive.

A second type of reaction was smaller in size, from 5 to 10 mm. in diameter, and after forty-eight hours disappeared without leaving any pigmentation. This reaction is considered as doubtful.

The tests without reaction at the end of forty-eight hours are classed as negative. Controls of broth diluted with salt solution gave no reactions.

The results in various classes of patients are given in the table. The results in the patients with known active tuberculosis were uniformly negative. These patients included some with each of the usual sanatorium groups of advanced, moderately advanced and incipient forms of the disease. Positive reactions predominated in a series of men in a venereal clinic. Nine of fourteen children, from 2 to 10 years, convalescing from diphtheria, scarlet fever and whooping cough, gave negative reactions.

Intracutaneous Skin Reactions with the Filtrate of Koch Strain of Bacillus Tuberculosis

Type of Patient	Number of Patients	Number of Reactions		
		Positive	Doubtful	Negative
Advanced tuberculosis	35	0	0	35
Moderately advanced tuberculosis	31	0	0	31
Incipient tuberculosis	8	0	0	8
Apparently normal adults	61	47	8	6
Apparently normal children	14	2	3	9

The effect of mixing serum from a patient giving a negative reaction with an equal quantity of toxin was studied. The patient had a moderately advanced pulmonary tuberculosis; the skin reaction was negative even in the quantity of 4 skin units; an equal quantity of serum and filtrate in one-half the dilution for the usual skin test was incubated for one hour at 37 C.; this mixture was then injected into the skin of two apparently normal persons in the usual way and in both instances there were no reactions. The control tests with the same dilution of filtrate were positive. This patient had had several subcutaneous injections of the filtrate, and afterward several intracutaneous tests had been made and in each instance the result was negative. Thirteen parallel tests were made with old dilution in salt solution which had stood at room temperature for two weeks and with a fresh dilution. Eleven reactions were negative when the old dilution was used, and two patients gave a plus-minus reaction. The tests were repeated three days later on the same patients with a fresh dilution, and ten of the thirteen were positive.

Obviously, the interpretation of these results must be tentative, but the presence of a reaction in the majority of apparently normal adult persons seems to indicate that there is a substance produced by the growth of this strain of tubercle bacillus in broth which acts in a different way from tuberculin. Further tests on a large number of patients are indicated with filtrates from a variety of strains of tubercle bacilli. As the children tested were convalescing from various contagious diseases, a series of normal children should be examined to determine whether they react in a similar way. The reaction to the filtrate in normal adult persons and the absence of reaction in tuberculous patients and in many children may mean that, in the presence of an active tuberculous focus, there may be sufficient antisubstance produced to neutralize the toxic substance.

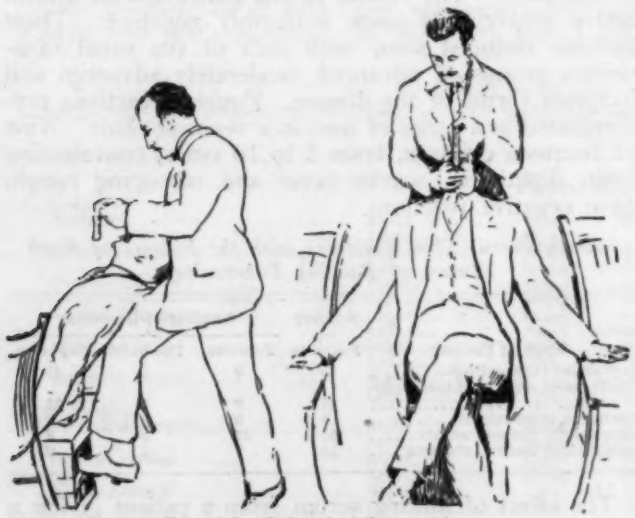
* From the John McCormick Institute for Infectious Diseases.

Clinical Notes, Suggestions and New Instruments

DORSAL SITTING POSITION FOR MAKING DIRECT LARYNGEAL AND UPPER ESOPHAGEAL EXAMINATIONS

J. PAUL DE RIVER, M.D., SAN FRANCISCO

In making a direct laryngeal or esophageal examination, it is essential that the patient be placed in such a position that the examiner may readily see the parts without undue strain on the patient or himself. In many instances in which



Essentials of dorsal sitting position.

it is necessary to make a hasty examination, assistants are not always available to hold the patient's head over the end of the table (Rose-Boyce). The position here described, which is applicable to home or office use, is easily performed without an assistant. It is extremely useful in making a quick examination of the larynx or upper portion of the esophagus, or when a large number of patients have to receive examinations and treatment, as in tuberculosis hospitals.

The patient is seated on a low stool. On each side of him is placed a chair, on which he rests his arms for support. The chairs should be higher than the stool on which he is sitting. The examiner stands directly behind the patient with his left foot on the rung of the stool and his leg bent slightly at the knee to conform to the curvature of the patient's back. The patient is instructed to rest his head against the examiner's thigh while the examiner introduces the direct speculum with his left hand, leaving his right free for any necessary local applications. The curvature of the spine can be regulated by the examiner's left leg, bending as needed. It further acts as a support for the patient's head.

861 Sutter Street.

GONOCOCCAL PERITONITIS COMPLICATING GONORRHEAL VULVOVAGINITIS

MORRIS GLEICH, M.D., NEW YORK

A girl, aged 4 years, awoke suddenly one evening complaining of severe abdominal pain. This pain, followed by vomiting and fever, continued all night. On examination next day the child was moribund. The abdomen was soft and relaxed. No tenderness was evident. The labia and introitus were red. There was no vaginal discharge. The rest of the examination was negative.

Twenty-four hours from the onset of symptoms, the child succumbed. Necropsy revealed an acute, diffuse, purulent peritonitis, with markedly inflamed tubes, ovaries and uterine endometrium. About 4 ounces of yellowish-red, odorless, purulent fluid was obtained from the pelvis. The liver and spleen were studded with necrotic foci. There was cerebral and pial edema. The appendix was normal. Histologic studies showed the typical acute, exudative, inflammatory reaction.

Smears from the pelvic pus and vaginal mucosa showed gram-negative intracellular diplococci and many pus cells.

COMMENT

Peritonitis following gonorrheal vulvovagino-endocervicitis is rare. When it occurs, it soon becomes chronic and is localized in the pelvis. This peritonitis, generalized and hyperacute, extended from the external genitalia. The fulminating character of the attack probably points to the adult type of gonococcus [1] as the offending organism, as the infantile type is usually associated with the "explosive" [2] yet chronic and localized form of peritonitis.[3]

9 Post Avenue.

A DEVICE FOR SUSPENDING AN ICEBAG *

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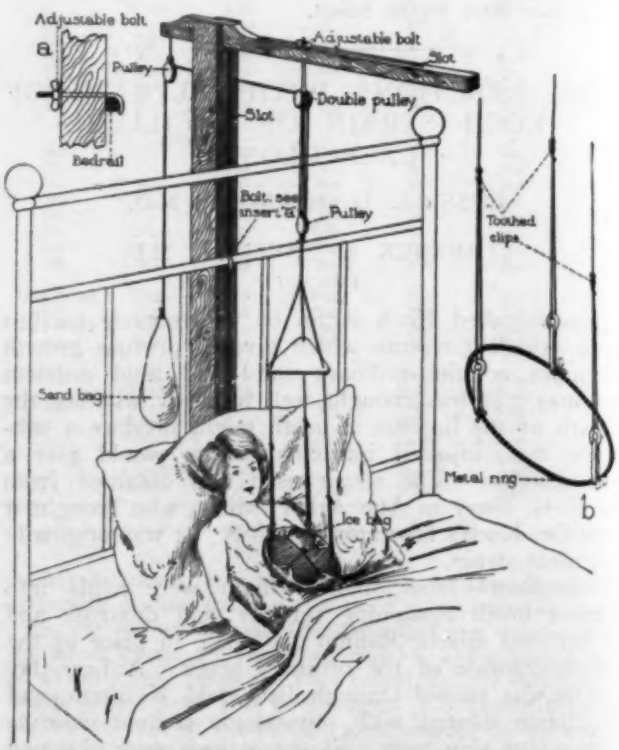
In the treatment of heart disease of children, it may be difficult to keep an icebag in place. Its weight in such cases is also an objection. To avoid these difficulties, a device as shown in the illustration has been constructed.

The apparatus consists of two slotted wooden beams made stationary at right angles, and an adjustable block and tackle to which the icebag sling and a counterbalance are attached. The upright beam is fastened to the cross rods at the head of the bed by means of two adjustable hooked belts. The horizontal beam carries the adjustable block and tackle which is to be made stationary directly over the point of application



Method of application of icebag.

of the icebag. The sling is composed of a strong wire ring suspended by means of three adjustable cords, which are held apart by means of a triangular wooden frame, through the corners of which the cords pass. The ring may be adjusted

1. Pearce, Louise: J. Exper. Med. **21**: 289 (April) 1915.
2. Comby, quoted by Northrup, W. P.: Two cases of Gonococcal Peritonitis in Young Girls Under Puberty, One Simulating Appendicitis, Arch. Pediat. **20**: 910 (Dec.) 1903.
3. Stooss, M.: Diseases of the Peritoneum, in Pfaundler and Schlossmann: The Diseases of Children **3**: 256, 1908.

* From the Section on Pediatrics, Mayo Clinic.

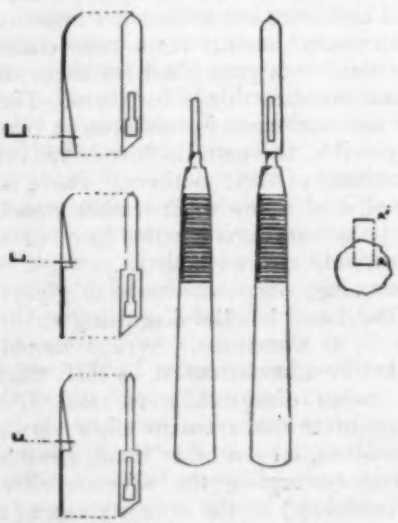
to any slant desired by means of toothed display hooks for changing the lengths of the suspension cords. The application of the icebag and of the counterbalance to the block and tackle is shown in detail.

The icebag may be put aside and readjusted easily and quickly.

A NEW BIOPSY KNIFE

EUGENE A. DUPIN, M.D., NEW YORK

In doing a biopsy of a new growth, it is our object to remove that portion of the growth in which the cells are young and actively proliferating. This area is at the periphery of the mass. We should accomplish our object with as little discomfort as possible to the patient. If we excise a wedge-shape portion of a growth by means of an ordinary scalpel it is necessary to make three or more separate incisions, and to use thumb forceps, etc. When the lesion is small I have found the use of the ordinary scalpel cumbersome. To obviate some of the difficulties of doing a simple biopsy and to accomplish our object more effectively, I would suggest the use of the knife here described.



Biopsy knife: It enters growth at *A* and emerges at *A'*

This instrument is a scalpel with a blade curved on the flat and with a cutting edge on each side and at its tip. The proximal edge of the blade is bent at an angle of 90 degrees, as shown in the illustration. The blades are of assorted sizes and may be used in the regular Bard-Parker handle.

The use of the knife is illustrated in the diagram. The convex surface of the knife is placed parallel to the surface of the lesion. Into the growth at *A* the tip of the instrument is gently pushed in such a manner that it dips under the periphery of the new growth and emerges at *A'*. If the instrument is pushed farther, the intervening tissue is completely excised, the specimen remaining on the belly of the knife. With such a technic, our object is accomplished rapidly, effectively and with a minimum amount of discomfort to the patient.

At the Rothschild pavilion of the Radium Institute of Paris, which is one of the foremost cancer clinics of the world, and where many biopsies are done in the course of a day, I first saw Dr. Roux-Berger follow this technic, with an instrument which was quite similar.

The blades of this scalpel are to be manufactured by the Bard-Parker Company, and may then be procured from any local dealer in surgical instruments.

565 West One Hundred and Forty-Fourth Street.

Thrombocytopenic Purpura Hemorrhagica.—Acute thrombocytopenic purpura hemorrhagica can be distinguished from acute lymphoid leukemia and aplastic anemia by the blood count.—Sir Humphry Rolleston.

TWO CASES OF TULAREMIA

W. W. G. MACLACHLAN, M.D.; W. J. FETTER, M.D., AND A. R. CRATTY, M.D., PITTSBURGH

These cases are, according to Dr. Francis of the United States Public Health Service, the first to be reported from Pennsylvania. It is interesting that both were recognized within a few days of each other.

CASE 1.—A man, aged 49, a butcher, admitted to the Mercy Hospital, Dec. 8, 1925, complained of fever, weakness and coughing. His illness began, November 24, two days before Thanksgiving. He had been preparing rabbits for the market and had cut his right index finger about two days before he began to feel ill. His finger became infected and was very sore, and remained so until shortly before admission to the hospital. Since the onset he had been feverish and had had many chills. He felt very weak and ached generally over the body. There was a good deal of coughing, but little sputum. He never had any bloody sputum. There were no gastro-intestinal symptoms except loss of appetite. There was no headache. He was ill fifteen days before entering the hospital.

The previous medical history was of no importance.

The man appeared to be quite ill. Movement in bed was somewhat painful. There was a small recent scar on the right index finger. A large lymph node about the size of a walnut was present in the right axilla. There were no other lymph nodes enlarged, and no sign of lymphangitis in the arm. A few fine râles were present over the lower lobes of the lungs. The heart was normal, and nothing abnormal was found in the abdomen. There was no conjunctivitis and the tongue was fairly clean. The blood pressure was: systolic, 88; diastolic, 54; pulse rate, 80; temperature, 102.2 F.; white cells, 8,600 and 10,800. The specific gravity of the urine was 1.023; it contained no albumin, no sugar and few white cells. The phenolsulphonphthalein test returned, 49 per cent. Nonprotein nitrogen was 36.1 mg. The Wassermann reaction, blood culture and agglutination test for typhoid and paratyphoid were negative.

Five days after admission, the patient's temperature fell to normal and remained there for the rest of his stay in the hospital. This was the nineteenth day of the disease. He was discharged on the twenty-fourth day, as we could not keep him in any longer, although at the time of his discharge he still had many râles in the chest but appeared to feel perfectly well and insisted on going home. The lymph node in the right axilla was about half the size that it had been on admission.

Blood was sent to Dr. Francis, who reported that it agglutinated *Bacterium tularense* in dilutions up to 1:640. The blood was taken on the twenty-fourth day of his disease, two days before the temperature had come to normal.

CASE 2.—A man, aged 35, a poultryman, became ill, November 26, Thanksgiving day, with general malaise, fever and aching back. December 1, he had a severe chill and was seen by his physician, who then considered the condition probably to be influenza. On this day his fever was 100.3, pulse, 92, and respirations normal. He had some râles in the right upper lobe. December 3, he had diffuse nosebleed; the temperature and pulse rate were normal. He got up and went out as he felt comparatively well, but on December 7 he had another chill with a rise in temperature. December 8, a small, ulcerated, reddish lesion at the base of the left little finger along the margin of the hand was noted. Two or three days after this he developed over both forearms pinhead pustules and some peculiar blotchy reddish spots, which later coalesced, on the backs of the hands. These gradually disappeared, but the hands still are a dull reddish and have shown considerable desquamation. The ulcer on the little finger healed, leaving a white scar surrounded by a reddish brown area. There were enlarged lymph glands in the left axilla; the left epitrochlear was much larger than normal. The posterior cervical glands also were enlarged. The enlarged glands in the axilla were noted shortly after the onset of the illness by the patient himself. About December 14 his eyes became sore and he developed a well marked conjunctivitis on both sides. He became extremely irritable

and nervous and was difficult to manage. This condition remained until December 23. A few days prior to this time, tularemia was suspected. The patient recalled that he had prepared a number of rabbits for the market between October 30 and November 26. The rabbits came from Ohio. He does not remember ever cutting himself, although he often had scratches on his arms and hands.

December 23, there were a well marked conjunctivitis, some puffiness under the eyes, some râles in the left upper lobe of the lung, and a moderate enlargement of glands in the left axilla. The left epitrochlear was normal and the posterior cervicals were not remarkable. The man looked extremely ill and he was very irritable and nervous. There was no elevation of temperature, and the pulse rate was 90. The heart and abdomen were normal; the urine examination was negative. Since this time he has gradually improved and on examination, January 4, there was no evidence of any conjunctival involvement. We do not consider the conjunctivitis in this case, in view of the absence of preauricular lymph node involvement, as being due to tularemia.

Blood sent to Dr. Francis showed agglutination in 1:1,280 dilutions for *Bacterium tularense*.

During the course of the illness the patient lost 18 pounds (8 kg.) and is making a very slow convalescence, as he is now still very weak. In this case we cannot locate accurately the time of inoculation of the disease.

200 South Craig Street.

Special Article

THE TECHNIC OF MEDICATION

A SERIES OF ARTICLES ON THE METHODS OF PRESCRIBING AND PREPARING, THE INDICATIONS FOR, AND THE USES OF VARIOUS MEDICAMENTS *

BERNARD FANTUS, M.D.
Associate Clinical Professor of Medicine, Rush Medical College
CHICAGO

(Continued from page 689)

OTHER MEANS OF LESSENING TASTE

When it is impossible to make a medicine tasteless, attempts should be made to minimize its taste. Among drugs of identical action, the one whose taste or odor is least offensive should be chosen. Potassium citrate is preferable to potassium acetate, creosote carbonate to creosote, betanapthol to naphthalene.

Solutions of colloidal substances, such as mucilage, starch paste, and milk, are capable of markedly diminishing the taste of all, but most especially of sour, saline and acrid substances. Milk forms a most useful vehicle for the administration of such medicaments as iodides, bromides and chloral hydrate. It is instructive in this connection to compare the taste of a 1 per cent solution of sodium iodide in water and in milk, or of a 1 per cent solution of citric acid in water and in starch water.

The policy of administering medicaments in food is one that deserves serious consideration. It would certainly be a mistake to spoil a patient's appetite for and enjoyment of an important food for the sake of giving medicine. Milk, not being an important food for the adult, may be used freely as a vehicle not only for its disguising value but also because it lessens gastric irritation. The food value of milk must not be lost sight of. Thus, to give a lean neurasthenic patient bromide in a glassful of milk after meals and at bedtime not only helps in the administration of the bromide but also in the cure of the neurasthenia by improving the patient's weight. For an obese patient, on the other hand, administration of milk in this manner should, of course, be tabu. Substances of purely saline taste can be successfully given in soup, by using the medicament instead of cooking salt for the seasoning of the soup. In this manner, a course of bromide may be given to an epileptic patient even without his knowledge. Sodium phosphate is also well disguised by soup; but to administer castor oil in soup may render soup nauseating to the victim for a long time to come. The old and well tried method of stewing with prunes senna leaves tied up in a gauze bag, whereby the dish acquires decided laxative properties without any noticeable change in taste, also deserves to be mentioned in this connection.

COMBINING OF TASTES

Decided tastes, when mixed, tend to obscure one another. Sweetening is by far the most popular method of overcoming disagreeable tastes. It renders alkaline, sour or salty tastes more acceptable, especially for women and children; but it does not improve the bitter or the "astringent" taste. As a rule, children should have sweet medicines prescribed for them; it is well to sweeten even tasteless things for them. The physician who prescribes medicines for children in "candy form," whenever possible, will earn the love of his little patients and the gratitude of their mothers. There is no reason why calomel, and many other rather tasteless agents might not be administered in the form of sweet, aromatic, attractively colored tablets.

For sweetening, sugar, saccharin or glycyrrhiza may be used. The latter has the disguising value of colloid in addition to its sweetness. Syrups should generally be diluted before administration, as their thickness renders them rather disagreeable to take. Adults who dislike syrups often find aromatic elixir very acceptable. To small children, on the other hand, elixir should not be prescribed (excepting the aqueous elixirs of the National Formulary) as the ordinary elixirs contain 25 per cent of alcohol, as much as the strongest kind of wine.

The value of gluside (saccharin), 0.5:1,000, in the sweetening of medicines, is not sufficiently appreciated. By means of it, powders are sweetened without increasing their bulk. As gluside is soluble in alcohol (3 per cent), ether, and to a slight extent in oils, those liquids can be sweetened which cannot be sweetened by sugar. Attention should especially be called to its value for sweetening oils. This is made use of in the preparation of Aromatic Castor Oil (N. F.), which is almost as sweet as honey and readily taken by children, though, unfortunately, the acrid after-taste of castor oil still remains. This is minimal with some extra fine brands of castor oil, as Kellogg's so-called Tasteless Castor Oil.[30]

The following is a prescription for Aromatic Cod Liver Oil recommended by Snow and Fantus:[31]

The gluside is dissolved in the compound spirit of orange, and mixed with the cod liver oil. The mixture

* This is the eleventh of a series of articles on "The Technic of Medication." When completed the articles will be assembled in book form.

30. Specifying a certain commercial brand in prescriptions should be avoided, unless the success of the remedy largely depends on the use of the quality inherent in this special product. While one must be very careful not to permit specious claims of manufacturers to influence one unduly in this direction, never to specify may mean sacrificing to an abstract principle the patient's interest and the prospects of ultimately securing general improvement of a product.

31. Snow and Fantus: J. Am. Pharm. A. 14: 884 (Oct.) 1925.

	Gm. or Cc.
℞ Gluside	0.1
Compound spirit of orange	5.0
Cod liver oil to make	250.0

is chilled in the icebox and filtered through paper, the first portions of the filtrate being returned until it runs through clear. Only a high grade of oil obtained in original completely filled containers is of sufficiently mild flavor to make disguising of the odor possible. After its preparation, this product should be preserved in completely filled, well stoppered bottles in the icebox. The lip of the bottle should be wiped clean each time a dose is poured out; otherwise rancidity at the mouth of the bottle might be sufficient to disgust the patient.

Before attempting to disguise medicaments by the introduction of marked tastes or odors, we must bear in mind the prevalence of gustatory idiosyncrasies. While sweet tastes are pleasant to children and to most women, they may be decidedly objectionable to some men, especially to those who smoke and use liquor. Bitter, while generally relished by such men, is so abhorred by children that one should beware of giving them bitter medicines.

The sour taste is sometimes useful for disguising especially salty, bitter or insipid tastes. Either citric acid in the proportion of 0.5 per cent or the syrup of citric acid may be used. Magnesium sulphate is disguised probably as much as is possible to do by giving it in an ice cold effervescing lemonade.

The bitter and the "astringent" taste are most improved by aromatics and by alcohol. The comparative pleasantness of compound tincture of gentian, or of compound tincture of gambir, may be noted.

In the flavoring of medicines, let it be remembered that powerful odors are generally less pleasant than more delicate ones. Flavoring should be employed as delicately as the refined woman uses perfume: so that one just notices the odor at the first moment but loses cognizance of it afterward. To have an odor so strong that it continually obtrudes itself on our consciousness is to make obnoxious what should be pleasant. For this reason, flavoring principles should be added in small quantities only, 2: 1,000 of a volatile oil or 2 per cent of flavoring spirit or tincture.

Another principle of perfumery that is not sufficiently appreciated in the flavoring of medicines is the development of a "bouquet." None of the successful perfumes are simple. They are all complex blends of a considerable, often large, number of odorous bodies—some, such as musk, unpleasant by themselves—probably chiefly because one can use such mixtures for a longer period without getting to dislike them than one could with a simple odor. The same fact accounts for the complexity of the flavoring—the aim at the production of "bouquets"—in beverages and in cookery.

To add a pleasant flavor to not disagreeably tasting or smelling medicine, the milder odors are to be preferred: lemon, orange peel, orange flowers, anise, fennel, tolu.

More potent, especially for disguising somewhat unpleasant tastes and odors, are pungent substances, such as peppermint, gaultheria, cinnamon, cloves, cardamom, ginger and sassafras.

For disguising really disagreeable odors, the most potent flavoring agents may have to be resorted to, among which may be mentioned rose, bergamot, bitter almond, lavender, balsam of Peru, vanillin and coumarin.

ELEGANT APPEARANCE

Like food, medicine should not only taste well but also look well. A mixture that looks like mud or like ink, even though its taste is pleasant, may by the very repulsiveness of its appearance be repulsive to the patient. Clear solutions rather than mixtures should be prescribed, not only because they look better but also because the dose of shake mixtures is much less uniform than that of solutions.

It is sometimes of advantage to impart to medicines an attractive color. Coloring may be useful not only by improving the appearance of the medicine but also sometimes by hiding the nature of the medicine from the patient or by acting through suggestion. Obviously, agents used for this purpose must be harmless.

For red coloring, one may use carmine for powder, and solution of carmine (N. F.) for neutral or alkaline aqueous or alcoholic liquids. As carmine is precipitated by acids, tincture of cudbear (N. F.), 0.5:100, is used for acid liquids; for oily liquids, alkanet. For yellow coloring, tincture of saffron for watery or alcoholic liquids may be used; for oily liquids, ointment or plasters, annotto. For brown coloring, compound tincture of cudbear (N. F.), 0.5: 100, is available. For blue coloring, one may use methylene blue, an aniline dye. Most other aniline colors should be avoided, since they are frequently more or less poisonous. For powders, ultramarine or indigo may be used; for black, lampblack.

EXTRA-ORAL ADMINISTRATION

Finally, if it is impossible to make the medicine palatable, we may resort, most especially for children, to rectal administration by prescribing the medicament in the form of suppositories, or as a solution to be added to starch water and injected into the rectum as a retention enema.

SUMMARY OF PLEASANT MEDICATION

The principles of pleasant medication may be thus summarized: Medicines should be made tasteless, if possible, without interfering with their activity, or the taste lessened as much as possible; then, should it be desirable, they may be sweetened or flavored, always with due regard to elegance of appearance.

(To be continued)

Diagnosis of Cancer of Stomach.—Four years of work with a diagnostic team have dispelled a good deal of my former pessimism with regard to the possibility of diagnosing cancer of the stomach at a stage in which radical treatment is still possible. We must depend, in the first instance, on the recognition by the general public that instead of treating themselves with "patent medicines" they should at once seek medical advice for digestive symptoms of a kind they have not previously experienced. Secondly, the general practitioner must recognize that if such symptoms are not the result of some obvious cause and do not rapidly respond to simple treatment, the patient should undergo a complete investigation with the object of settling the diagnosis. I believe that it is possible in a very large majority of cases to decide definitely within ten days of taking a patient into a hospital or clinic whether the likelihood of cancer of the stomach is sufficiently great to warrant operation. The diagnosis can often be established with certainty; in the remaining cases it can be made with so great a measure of probability that an exploratory operation becomes the only justifiable treatment, even if the symptoms are of short duration or slight in degree. If the patient consults his doctor at the right time, and his doctor appreciates the value of a complete investigation in suspicious cases, a diagnostic team should be able to obtain sufficient evidence to decide whether an operation is indicated or not within a month of the onset of symptoms.—Hurst, A. F.: *Guy's Hosp. Rep.* **75**:395 (Oct.) 1925.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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SATURDAY, MARCH 13, 1926

CHLORIDE IN DIABETIC ACIDOSIS

The conception of acidosis in the living organism has undergone many changes since that term was introduced into the literature of chemical pathology. One of the earlier observations that helped to formulate a new idea of the body's response to unusual increments of acid was that of ammonia production serving to neutralize acidity. This biochemical mechanism is a highly interesting one; but investigation has shown that it is only one, and by no means the only device that the organism brings into play in its effort to prevent abnormal acidity from developing when there is an undue preponderance of acid production. The kidneys function in no small measure to bring about a compensatory elimination of acid; and the tissues may furnish bases other than ammonia that also prevent acid accumulation. Consequently, a recent writer [1] has described acidosis as a condition in which the essential feature is not an actual acidity of the blood, but an impoverishment of the body in available bases, whereby there results a decreased capacity of the tissues to get rid of carbon dioxide and other acids formed in their metabolism. Practically, we are further told, such acidosis results either from defective oxidation of organic acids formed in metabolism or from defective elimination of mineral acids (acid phosphate) because of impaired renal function. The chief example of the former is the acidosis of diabetes, of the latter the acidosis of nephritis; and mixed forms may occur.

The problem is more complex, however, than even this generalization suggests. Peters [2] and his collaborators at Yale University have demonstrated that the acid-base equilibrium may involve profound "shifts" in the electrolytes of the plasma. The most important point established by the studies is the fact that the organism responds to the production of abnormal amounts of acids of various kinds or the reduction of plasma bicarbonate by a transfer of water, chloride or base from the tissues to the blood, or vice versa. Reduction of the plasma chloride by this means liberates base associated with it, for combination with other acids, and therefore tends to reduce acidosis, while an increase of chloride has the opposite effect. In other words, a transfer of chloride in one direction is equivalent to a movement of base in the opposite direction. Peters further points out that the whole mechanism just described confers on the blood a greater ability to resist the disturbing effects of conditions that alter electrolyte equilibrium by rendering the acid and base stores of the tissues available where and when they are most needed. From the standpoint of other functions, it should be noted that these electrolyte changes may occur with such rapidity as to produce recognizable differences in the composition of arterial and venous blood and consequently their ability to absorb, transport and dissociate carbon dioxide and oxygen. The respiratory functions thus become involved.

In the examination of these considerations with reference to the actualities of the diabetic patient, it has been found [2] that ketosis of considerable severity may actually develop, as measured by the accumulation of organic acids in the serum, without appreciably affecting the bicarbonate of the plasma. In these cases the chloride content is usually found lowered in the plasma, and the base required for the neutralization of the ketone acids is evidently derived from chloride. In severe diabetic acidosis, base for the neutralization of the acids may be supplied by both bicarbonate and chloride. The decrease in chloride "liberated" from its base may occur with extreme rapidity and without any appreciable augmentation of chloride excretion, thus indicating that the chloride ion is merely transferred to the tissues.

The evident involvement of the chlorides in the readjustments due to diabetic acidosis presents considerations that may have a profound bearing on therapy. It is scarcely likely that, in the mobilization of base to meet the emergency of acidosis, the released chloride is permanently retained in the tissues to which it has penetrated. Such tissue retention is presumably temporary, elimination in one way or another presently taking place to avert undue accumulation. Accordingly, not only is base likely to be lost to the body in the successful excretion of the organic acids, but the chloride store also may become depleted. Peters ventures the suggestion that if chloride can aid in the maintenance of the blood reaction by yielding base for the neutralization of the ketone acids in severe diabetes, and can by this means spare bicarbonate and relieve the respiratory mechanism, the administration of sodium chloride in conditions of acidosis would seem to be a rational procedure. It remains to be seen whether this inference will be supported by clinical experience.

1. Wells, H. G.: Chemical Pathology, Philadelphia, W. B. Saunders Company, 1925.
2. Peters, J. P.; Bulger, H. A.; Eisenman, A. J., and Lee, C.: Total Acid-Base Equilibrium of Plasma in Health and Disease, VI, Studies of Diabetes, J. Clin. Investigation 2: 167 (Dec.) 1925.

FATIGUE AND DISEASE

Disease has been defined as a change produced in living things in consequence of which they are no longer in harmony with their environment. With this definition we may couple Herbert Spencer's dictum that life is the continuous adjustment of internal relations to external conditions. Accordingly, there is no sharp distinction separating health in general from disease. The latter may be due quite as readily to the breakdown of bodily defenses against ever present dangers as to the inroads of unexpected or unconquerable invaders. Perhaps that is what Sir James Paget had in mind when he ventured the statement that fatigue has a larger share in the promotion or transmission of disease than any other single causal condition that can be named.[1] Although fatigue is a phenomenon that every person recognizes readily in a subjective way, physiologists still are struggling with the objective interpretation of its nature. One may read of the alleged accumulation of "fatigue substances," notably in the muscles, and of the circulation of products of overwork that are not ordinarily present in the blood; but a well founded theory of the nature of fatigue remains to be formulated. It is known that prolonged muscular activity, and particularly contractile effort under the influence of a lessened supply of oxygen, may lead to appearance of unusual quantities of lactic acid, among other demonstrable substances. These can exert noticeable changes on various bodily functions, such as respiration, the heart beat, and the irritability of the muscle itself. The mere statement of such demonstrable effects, however, gives only partial insight into the far-reaching consequences that may be involved.

One of the "antidotes" to fatigue is rest, which affords an opportunity for recuperation. There is a widespread belief that resistance to infection is promoted by bodily rest, and a common method of combating it consists in promoting rest. A recent writer has even referred to the doctrine that the pain of injuries is beneficial because it secures local rest, which promotes healing; and he suggests that it may reasonably be extended to the general malaise of infections. It might be assumed as a possible corollary of this that fatigue conduces to susceptibility to infection. Experiments to test this hypothesis have not been entirely lacking. Abbott and Gildersleeve,[2] observing that animals fatigued by running exhibit a depression of the opsonic index, concluded that they must have a greater susceptibility to bacterial infection. The experiments of Spaeth at Johns Hopkins University lent no support to such a conclusion.[3] On the other hand, observations of Boycott and Price-Jones[4] at the University College Hospital Medical School, London, reopen the entire question. They demonstrate that under certain circumstances fatigue does promote infection. All-inclusive statements should not be made. Thus, an amount of exercise sufficiently severe to delay substantially the normal increase of weight of growing animals did not break down their natural resistance to tuberculosis. The feature deserving of emphasis at this time is the necessity of more exact information on a large variety of specific features of possible interrelations between fatigue and disease. At a period when industrial efficiency and the bodily welfare of the worker is a prominent topic of serious discussion, the bearing of the possible relation of fatigue on the causation and the prevention of infectious diseases in industrial work is sufficiently obvious. Lee has, indeed, pointed out that the identification and treatment of industrial diseases and the appreciation of industrial hazards to health and ways of preventing them are parts of the general modern recognition of the importance of the individual and the duties of society toward him. Here, Lee adds, the physician, the philanthropist and the legislator have worked in helpful partnership.

1. Lee, F. S.: The Human Machine, New York, Longmans, Green & Co., 1918.
2. Abbott and Gildersleeve: The Influence of Muscular Fatigue and of Alcohol on Certain of the Normal Defenses, Univ. Pennsylvania M. Bull. **23**: 169, 1910.
3. Fatigue and Resistance to Disease, editorial, J. A. M. A. **79**: 2165 (Dec. 23) 1922.
4. Boycott, A. E., and Price-Jones, C.: Experiments on the Influence of Fatigue on Infection, J. Path. & Bacteriol. **29**: 89 (Jan.) 1926.

THE STRUCTURE OF PROTEINS AND OF LIVING TISSUES

It is now a score of years since Emil Fischer made his great contribution to our knowledge of the nature of proteins, showing that they are constructed, at least in part, of chains of amino-acids united to one another by their basic and acid radicals, forming the so-called peptids. This construction had already been suggested by Hofmeister, but it was Fischer who first really proved it by finding such peptids among the products of incomplete cleavage of proteins, by producing such polypeptids by synthetic means, and by showing that these synthetic peptids are digested by trypsin and erepsin.[5] Following these discoveries, it was generally thought for a time that proteins consisted of great series of such chains of amino-acids, containing varying numbers of the score of amino-acids known to occur in proteins, in different proportions and groupings. Many of the properties of proteins are compatible with such a structure, but it was soon found that there are other properties that cannot be attributed to simple chains of amino-acids. Proteins are far too labile and reactive to correspond to such a simple and relatively stable structure. Consequently, biologic chemists of late have been turning their attention particularly to the solution of the problem of the exact arrangement of the amino-acids in the protein

5. An excellent discussion of protein structure is given by Andrew Hunter in his Presidential Address before the Royal Society of Canada (Tr. Roy. Soc. Canada, May, 1925). Compare Abderhalden; Naturwissenschaften **12**: 716, 1924.

molecule. Reasons have been advanced for believing that some, at least, of the amino-acids are united to one another at two or more points, to form ring compounds, instead of end to end in chains; but just what the ring compounds are or how large a proportion of the entire protein molecule they form, is still completely unknown. Abderhalden, Karrer, Bergmann, Troensgaard and others have brought forth evidence and theories as to these ring compounds in the proteins, but the final solution of the problem is not in sight.

Hunter and his colleagues have studied the disintegrative action of different proteolytic enzymes on proteins to see what light can be obtained in this way as to protein structure. They believe their observations show that proteins certainly contain some combinations of amino-acids different from the simple end-to-end chains of the peptids of Fischer, but probably such peptids form the greater part of the protein molecule, apparently 70 per cent or more, except perhaps in the insoluble scleroproteins, such as keratin. How the amino-acids are arranged in relation to one another is still an almost untouched field, although Dakin, Hunter and others have made a start. How difficult the problem is may be realized when it is recalled that a single protein molecule may contain fifteen different amino-acids, united to form a molecule of a size indicated by its molecular weight, which recent observers [6] estimate at from 10,300 for gelatin to 192,000 for casein, with egg albumin (33,800), fibrin (42,000) and serum globulin (81,000) in intermediate positions.

If we still lack exact knowledge of the structure of isolated proteins, which are dead, inert, relatively inactive compounds, we are undoubtedly still less well informed about the proteins that occur in living tissues, for there is certainly reason to believe that the latter are in some important way different from isolated proteins, like casein, or reserve food proteins, like egg albumin or edestin, or even from the dead tissue protein found in market meat. Loew [7] has considered at length the nature of the "labile" proteins of living cells, as compared with dead tissue proteins or chemically isolated proteins. That there are differences is shown by the fact that agents such as hydrazine, hydroxyl amine and hydrocyanic acid, which have no effect on dead proteins, have a profound effect on the proteins of living cells, even when greatly diluted. Loew suggests that this sensitivity of the labile proteins depends on the presence in them of extremely active aldehyde radicals, which are lost, combined or inactivated in the dead proteins. Others have suggested that the lability depends on the highly developed surfaces of the emulsions which these colloids form with lipoids in the living cells, which are rapidly altered with the development of asphyxial acidity in the tissues after death. Complex as this problem is, its solution would still leave us far from an explanation of the essential nature of living tissues, since the life activities depend on extremely complex organizations of labile proteins in enzymes and into such structures as chromosomes, nucleoli and nuclear membranes. Apparently as yet we have gone little beyond the initial steps of survey of the problem of the structure of living cells; at least so it seems when we observe our distance from the goal. But when we look back to the state of our knowledge of this subject in 1900, it seems that at least a creditable beginning has been made.

6. Cohn, E. J.; Hendry, J. L., and Prentiss, A. M.: The Molecular Weights of Proteins, J. Biol. Chem. **63**: 721 (April) 1925.
7. Loew, Oscar: Ueber labile Eiweisskörper, München. med. Wchnschr. **72**: 898 (May 29) 1925.

MARASMUS AND PROTEIN HYPERSENSITIVENESS

The classic experimental instances of the form of allergy more properly designated as protein hypersensitiveness have been induced by injection of the antigenic substances into test animals. It has been well established that, whereas proteins of the most varied origins may function as sensitizing agents in this way, the disintegration products of the albuminous substances no longer retain this potency. Thus, albumin is antigenic; the peptones and amino-acids obtained from it by digestion or otherwise are not. Realizing that the processes of alimentation are supposed to lead to disintegration of the protein molecule, it has been easier to understand why persons are not sensitized by the proteins that they consume. It would, indeed, be a serious menace to our well being if every occasional intake of a food protein of unusual origin were likely to lead to hypersensitiveness to it. For most instances of such allergy the assumption has sufficed that the introduction of minute traces of the antigen into the circulation occurred through mucous membranes of the nasopharynx. Of late it has been observed, however, that under certain conditions the alimentary barrier is not as perfect in its protective functions against unchanged proteins as was assumed. Thus, Anderson and Schloss,[1] who examined the blood of ninety-eight marasmic infants for precipitin to cow's milk, obtained a positive test in eight subjects. Precipitin was not present in the blood at all times, but in some cases it was found in only a relatively small number out of the total examinations.

Anderson and Schloss believe that the presence of precipitin to cow's milk protein in the blood of marasmic infants almost certainly indicates that such protein with antigenic properties has entered the blood stream at some time. They have shown directly,

1. Anderson, A. F., and Schloss, O. M.: Allergy to Cow's Milk in Infants with Nutritional Disorders, Am. J. Dis. Child. **26**: 451 (Nov.) 1923.

however, that foreign protein is absorbed during diarrhea, and that such absorption is followed by the appearance of precipitin and the anaphylactic antibody. From a new study[2] in the same department at the Cornell University Medical School, it is apparent that the enteral absorption of antigenic protein by normal or marasmic infants leads not only to the appearance of a specific precipitin in the blood, but also in many cases to cutaneous hypersensitiveness. The results also indicate that there is a definite coincidence between the appearance of the skin reaction and the presence of precipitin in the blood. According to Anderson, Schloss and Myers,[3] the phenomenon of precipitin formation observed in normal infants is strikingly different from that observed in marasmic infants. In the latter, the continued ingestion of cow's milk may fail to provoke the production of precipitin until the lapse of many weeks, while in normal infants precipitin appears promptly after the first ingestion of cow's milk. Furthermore, the degree of precipitin formation in marasmic infants is much more marked than in normal infants, indicating an absorption of relatively larger amounts of antigenic protein. Judging by the duration of precipitin in the blood, marasmic infants absorb antigenic protein from the intestinal tract over a much longer period of time than do normal infants.

These observations demonstrate that when normal infants ingest cow's milk, egg albumin, sheep serum or almond for the first time, sufficient protein is absorbed in antigenic form to provoke the production of specific precipitin in the blood. The early disappearance of the precipitin would seem to indicate that such absorption is of relatively short duration. Phenomena such as those here discussed raise anew the question as to whether the entrance of foreign protein into the blood stream bears any causative relationship to the nutritional disorder known as marasmus.

2. DuBois, R. O.; Schloss, O. M., and Anderson, A. F.: The Development of Cutaneous Hypersensitiveness Following the Intestinal Absorption of Antigenic Protein, Proc. Soc. Exper. Biol. & Med. **23**: 176 (Dec.) 1925.

3. Anderson, A. F.; Schloss, O. M., and Myers, Constance: The Intestinal Absorption of Antigenic Protein by Normal Infants, Proc. Soc. Exper. Biol. & Med. **23**: 180 (Dec.) 1925.

Current Comment

PEAKS OF MEDICAL HISTORY

Following the announcement in THE JOURNAL that a class of medical students had chosen as the greatest names in medical history those of Pasteur, Hippocrates, Harvey, Osler, Lister, Koch, Galen and Laënnec, the editor of the *Medical Press and Circular* conducted an inquiry among British medical historians. To this Power, Comrie, Moon, Spencer, Crawfurd, Mortimer and others contributed their views. The final selections of the group classified by votes indicated the following choice: Harvey, 10; Hippocrates, 9; Sydenham, 8; Pasteur, 8; John Hunter, 5; Galen, 3; Vesalius, 2 and Celsus, Leonardo da Vinci, Morgagni, Laënnec and Lister 1 each. It has been argued that Galen is of greater importance than Hippocrates because of the somewhat legendary character of the latter and because the galenic system dominated medicine for fifteen centuries. On the other hand, it has been urged that medieval darkness alone enabled the galenic system to uphold its supremacy for so long a period. The present inquiry recalls an investigation reported by Dr. Charles L. Dana in 1919.[1] He studied Cattell's list of the most eminent thousand men of all time. There were no physicians among the first hundred, and only two, Hippocrates and John Hunter, among the second hundred. Based on our present knowledge of what scientific medicine has meant to the world, Cattell's list can be considered only as proof of the fact that the world is slow to recognize the value of medical discovery. The eminent thousand were selected on the basis of space and attention given to men in various encyclopedias and biographic works. An analysis of the history of medicine led Dr. Dana to the demonstration of six great peaks, each dominated by a group of outstanding men. In such a study the names of Hippocrates, Galen, Vesalius, Harvey and Jenner become especially prominent. After all, the function of such estimates is to lend a vicarious interest to what medical students are inclined to regard as a somewhat stupid adjunct to the medical curriculum. If that interest will be sufficiently inspiring to stimulate even a modicum of original reading, leading to a true perspective, it will serve a valuable purpose.

CARBOHYDRATE UTILIZATION IN RENAL DIABETES

The advent of microchemical analysis of the blood has made possible a more accurate differentiation of different types of glycosurias, particularly with respect to their therapeutic indications and prognostic features. One definite consequence, for example, has been the clearer identification of the abnormality of function commonly designated as renal diabetes. The cardinal features indicative of this condition have been concisely described as persistent glycosuria that is relatively independent of diet and is not attended with hyperglycemia or other indications of classic diabetes. Despite these differentiating features, some clinicians of experience have hesitated to permit this type of glycosuria to be divorced too readily from diabetes mellitus. Joslin,[2] for example, admits that the prognosis of renal glycosuria is good, but asserts that it must be guarded "because of the possibility of the change of a supposed renal glycosuria into true diabetes." It is worth while, therefore, to examine the cases of glycosuria without hyperglycemia from every angle that may throw light on the pathologic factors involved. There are already a considerable number of cases of sufficiently long standing without development of more untoward symptoms to give emphasis to the presumable individuality of renal diabetes as a separate entity. This has recently been accentuated by

1. Dana, C. L.: Eminent Physicians, the Charaka Club **5**: 97, 1919.
2. Joslin, E. P.: Treatment of Diabetes Mellitus, Philadelphia, Lea and Febiger, 1923.

Paullin [3] of Atlanta, who has observed the effects of administration of glucose to suitable patients with renal glycosuria. Under such conditions they respond with a pronounced rise in the respiratory quotient, indicative of carbohydrate combustion, in the same way as normal persons do. Paullin consequently believes, as others [4] have maintained, that the patients metabolize and store carbohydrate in the usual way, in harmony with previous suppositions.

Association News

ANNUAL CONGRESS ON MEDICAL EDUCATION, MEDICAL LICENSURE AND HOSPITALS

Held in Chicago, Feb. 15, 16, 17 and 18, 1926

(Continued from page 696)

COUNCIL ON MEDICAL EDUCATION AND HOSPITALS

FEBRUARY 16—MORNING

Saving Time in Education

IN HIGH SCHOOL AND COLLEGE

CHARLES H. JUDD, PHD., Chicago: It has long been known that preparation for entrance on the practice of medicine is delayed in America. The cause for this delay has been sought by those interested in medical education in the college. The real difficulty arises much further back in the American educational system. There is waste in American schools because too much time is spent on elementary education and because the different units of the educational system are not closely articulated. It is difficult to bring about a reorganization of the schools of the United States because these schools are locally controlled. The development of an intermediate unit between the elementary school and the high school, known as the junior high school, is a promising move in the direction of a better adjustment of the educational system of this country. This readjustment requires the preparation of new materials for teaching and requires also an intelligent public opinion. If the reorganization can be completed at this point and can be paralleled by similar reconstruction between the high school and the college and the college and the professional school, time and energy can be saved and a much higher degree of intellectual maturity can be obtained than is secured by the present system. What is needed in order to effect all these reforms is not the establishment of some central authority with arbitrary power, but a thorough scientific understanding of the problems of education.

IN THE MEDICAL SCHOOL BY SHORTER VACATIONS, QUARTER SYSTEM, OR OTHER METHODS

DR. RAY LYMAN WILBUR, Stanford University, Calif.: This paper will be published in full in THE JOURNAL.

Graduate Medical Education

THE UNIVERSITY GRADUATE MEDICAL SCHOOL AND MEDICAL SCIENCE

GUY STANTON FORD, PHD., Minneapolis: If the development of research and advanced study in medicine parallels the history of the development of every other field, they will owe their nativity and their nurture to the fostering care and guidance of great universities. In these and in these alone can they find that close association with both the parent and coordinate sciences whose contributions and achievements, whose standards, aims and technics can guide, inspire and support medical education on the research or graduate level. The four essentials of graduate study are a growing body of clinical teachers who have abandoned opinion and the exploitation of skills for experimentation and investigation; a body of students adequately prepared to follow the new leadership; an equipment in hospitals, in clinical material, and in laboratory and other facilities; a body of data and methods of acquiring new facts that are measurable and comparable. To these four essentials, medicine adds an intimate relation with the oldest and most important and dominant disciplines, those of physics, biology and chemistry, and their progeny, biophysics and biochemistry. The aims of graduate medical work are two: There is first the training of the researcher and independent worker in the field of his aptitude and choice. The second is to give to society intensively trained and properly certified specialists who have also in the course of their training had a glimpse of the scientific method and approach to clinical cases as problems. Administration is a matter of making the graduate medical organization fit its function as here outlined. That the medical school faculty should as fully control graduate work as it does the undergraduate medical curriculums is a perfectly comprehensible theory of control. But only a wholly unsympathetic attitude on the part of the existing graduate organizations justifies a separate organization in medicine or any other field. If attempted, it is likely to cut off staff and students from those fruitful contacts that come from free intercourse with all those fields of active research which are basic to medicine as a biologic specialty.

In discussing medical science and the problem of its future, all will agree that the adjective "medical" is a convenience which brings before us not a new or different science of either a higher or lower order but a series of problems furnished by the pathologic physiology of one biologic group—our own human kind. The essential unity of science is not a phrase but a profound conviction that must lie at the basis of approach to every major problem. This discussion seeks to emphasize the gain for all medical education and the necessity for medical research and science, of recognition of the parent fields. Graduate medical work is dependent on its intimate relations with all other departments of the university. Physically and administratively, all the fields cognate and contributory to medicine should be housed and directed in the closest possible intimacy. Medicine when put on a true university basis is properly in the hands of a faculty that joins the professor of physics, the professor of biology and the professor of chemistry with the pathologist, the physiologist and the internist.

If we turn our attention to the business of developing and forwarding the science itself through the work of devoted and competent scholars, we can distinguish three different ways in which it is being done. There is, first, the significant service performed by the single researcher who by his individual effort synthesizes and applies to complex problems the methods and the past contributions of several fields. The second agency is the group of associated workers selected from various sciences and combined as collaborators in one endowed research institution or more informally cooperating across departmental lines within the framework of a great teaching university, and recruiting and initiating younger scholars from the graduate teaching body. The third method, that of geographically separated workers organized in a great cooperative attack on a problem, is the most difficult to coordinate. It is nevertheless necessary, since the workers vital to the solution of complex problems are never located in one center, either an institute or a university. What is needed at present to aid in the development of all three types of investigation is a flexible, intelligent, far-visioned national institute for medical research, well supplied with funds. My challenge to this council is to make itself the agency for organizing on a broad, inclusive basis such spiritual and financial support for medical science.

POSTGRADUATE ASSEMBLIES

DR. WILLIAM B. PECK, Freeport, Ill.: In presenting the question of medical assemblies, I refer to any group of men in the active practice of medicine who are gathered together for the purpose of increasing their knowledge on subjects of a medical nature. Some authorities tell us that the small group assemblies are best adapted for the distribution of

3. Paullin, J. E.: Glucose Utilization in Renal Glycosuria, Arch. Int. Med. **37**: 88 (Jan.) 1926.

4. Finley, F. G., and Rabinowitch, I. M.: Renal Glycosuria, Quart J. Med. **17**: 260 (April) 1924. Ladd, W. S., and Richardson, H. B.: Clinical Calorimetry, XXXVIII, The Utilization of Carbohydrate in a Case of Renal Glycosuria, J. Biol. Chem. **63**: 681 (April) 1925.

medical information. It is not a question of the size of the assemblies but of the character of the program presented. Both operative and diagnostic clinics are essential factors in the success of the meeting. The danger of overcrowding programs of medical assemblies has been emphasized. But in arranging a program of such magnitude that it must cover all the different branches in the science of medicine, it is necessary to show courtesy to the specialties, as well as to general medicine. These assemblies give the specialist and the general practitioner a chance to become acquainted. Ways and means should be provided whereby any physician, regardless of his location, will be furnished with the opportunity of obtaining education. A big medical assembly is not a one man job. If it is to prove a success, it must have the cooperation and support of many great minds. The things that play the greatest mischief in large medical organizations are politics and red tape. The thing that destroys the success of small societies is the appointment of too many committees. The things that build up medical organizations are good programs, hard work and good places of meeting. The public press should receive the greatest possible courtesy from the medical profession. When a big medical assembly meets in a city it is but natural that the press should wish to know "what it is all about," and it is up to the press committee to give the proper information.

UNIVERSITY EXTENSION WORK: AN ADVENTURE IN PUBLIC HEALTH EDUCATION

DR. JOHN SUNDWALL, Ann Arbor, Mich.: The medical profession is mindful of the lamentable ignorance of the laity in general regarding the fundamentals of health promotion and disease prevention, and of the wide gap existing between scientific medicine and the attitude of the general public toward and knowledge of it. We know, also, that it is because of this gap that mountebanks, pseudomedical practitioners and "healing cults" thrive by exploiting superstitions, engendering fears and ignorance relative to the body in order and out of order and by grossly discrediting scientific medicine, with the masses, whenever and wherever possible. In recent years, scientific medicine has been paying increasing attention to the problem of closing up this gap. With this purpose and in an altruistic spirit, the Joint Committee on Public Health Education in the State of Michigan was organized. The committee was not concerned with going out to fight pseudomedical and other fraudulent medical practices. Its purpose was and is to get medical truths to the people. The first meeting brought out the fact that the extension division of the University of Michigan possessed the organization and machineries whereby the work of the joint committee could be most advantageously carried on, and was prepared to furnish at once audiences for lectures in practically every township of the state. Naturally, the director of the extension division was included as one of the university's representatives on this committee, and became its chief executive officer. Early the value of cooperation was appreciated. Why not include representatives of other state-wide health agencies in this good work? was asked, and for the first time in the history of the state, representatives of these various agencies sat in council together. Experience is demonstrating that the most fruitful fields for this type of public health education are parent-teacher associations and high school groups. Furthermore, we have learned that the lecture program must be well organized, supervised and adapted to the particular groups addressed. An experiment will be made in the near future to see whether results merit the sending of speakers into industrial plants during the noon hour. In addition to supplying lectures, the joint committee finds that it must pay attention to various problems closely interrelated with public health education. One of its subcommittees has made a study of and reported on the nursing situation in the state of Michigan. Another subcommittee is working on a plan for supplying the state press with timely articles on matters pertaining to health. Still another committee has prepared a report on courses which might be given by colleges and universities in order to give women an elementary knowledge of the care of the sick. Our adventure in health education, so far, has demonstrated beyond doubt that people want to know fundamental truths of both preventive and curative medicine. The public sees the physician as a teacher and educator. The physician gets a new and interesting aspect of the public. A splendid spirit permeates the committee. To states wherein there exists untoward duplication, misunderstandings, and friction between the various official and voluntary health agencies, let me suggest as a remedy a joint committee on public health education.

DISCUSSION

DR. T. C. ROUTLEY, Toronto, Canada: There are probably four ways by which we can keep up to date: through experience and practice, through contact with our fellows, by reading, and taking advantage of such postgraduate facilities as are offered. I am sure extramural work will give to the profession that something which it needs, particularly in the rural areas, and at the same time will make the people feel that the medical profession is endeavoring to do its bit.

GILBERT E. SEYMOUR, Milwaukee: I suggest that in the education of the public and the profession there be some effort toward the standardization of literature in the education of the public, and that plain language be used in respect to the copying of textbooks, one generation after another. Cooperative effort of the state medical societies, the university medical school, and the extension division, is the ideal arrangement.

DR. EDWARD EVANS, La Crosse, Wis.: For the last four years, especially the last three, we have issued in Wisconsin what is called a lay number of our state magazine. That magazine went out this year to about 8,000 people. Secondly, we have been sending *Hygeia* to the same class of people as a Christmas present, a year's subscription, for the last two years. We really think we have educated not only the people in public health matters but also, I believe, our legislators to recognize that the medical profession is not a medical trust, but is deeply, earnestly and intelligently concerned in their welfare.

DR. J. C. LITZENBERG, Minneapolis: I believe the biggest thing in the success of our work in the graduate medical education department at the University of Minnesota has been the fact that we are under the direction, under the administration of the graduate school. There is no friction between the medical school and the graduate school.

DR. GUY S. FORD, Minneapolis: That there can still be found textbook material which represents antiquated ideas rests not only on the man who produces those textbooks but also on the men who review those textbooks. A few reviews which look unfavorable to an author who did that kind of thing would put a quick end to the promulgation of an ancient error. I want to see this council on medical education the parent organization of some kind of national institute.

DR. RAY LYMAN WILBUR, Stanford University, Calif.: I should like to present my approval of Dr. Judd's paper. The time is coming when the medical educator will insist on having time saved in the school before we get to medicine, but I think that until we get to saving it in the medical school we are not exactly on the firmest basis in connection with the schools lower down.

DR. ARTHUR DEAN BEVAN, Chicago: What we most need is some machinery by which we can bring about this saving of two years within a reasonable period of time. Would it be possible to create such machinery that would take the place of some national power that could study and finally dictate to the country the general scheme that should be adopted?

DR. B. D. MEYERS, Bloomington, Ind.: We have this machinery working in Indiana. Many students get the advantage of double promotion twice in the first six years, so that they enter junior high school with one year already saved. A student may begin his Latin in junior high school. Then, a capable student has the opportunity in high school of carrying not four subjects but five subjects. It makes a total of four semesters, or two years saved.

ALBERT B. DINWIDDIE, New Orleans: The eighth grade is a grade in which the student simply marks time. The New Orleans schools recognize that. However, because of

local difficulties they have been unable to come down to the seventh grade basis. They have put three high school subjects into the eighth grade.

FREDERICK C. WAITE, PH.D., Cleveland: During the first hundred years of medical education in this country the student had no vacation whatever. The education was divided into two phases: one in the school, the other under the preceptor. The schools abolished the preceptor but gave the student nothing to take up the time when he had been taught by the preceptor.

DR. THOMAS J. CROW, Dallas, Texas: I believe the educational institutions of this country should pay more attention to the fundamentals and that in that way we would get along faster.

DR. EDWIN G. EARL, Chicago: There is not a parent on the face of the earth who, if his child could save a year or two in school, would not want him to do it. Tradition, in connection with the colleges, is forcing these things on the secondary schools and the primary schools.

DR. AUGUSTUS S. DOWNING, Albany, N. Y.: I want to dissent in connection with that proposition. The loss of time is in the elementary schools and in the high schools. Put your boy into college at 16 years of age and open up an entirely new field of knowledge to him. You will, in this way, have men at 18 years who can go on and take the medical instruction.

CHARLES H. JUDD, PH.D., Chicago: If this organization will study the whole problem of education and cooperate, I think that a great many of the difficulties touched on by the various speakers can be removed.

DR. RAY LYMAN WILBUR, Stanford University, Calif.: We can do what was suggested by Professor Judd. Individual students are doing it, as is shown from what Dr. Meyers said. At the same time, we can adopt, through our medical schools, a method in which we can use practically the whole calendar year.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

ARIZONA

Society News.—The Yuma County Medical Society held a special meeting recently to which representatives were invited from the Imperial County Medical Society and the Maricopa County Medical Society. Drs. George R. Stevenson, Maynard C. Harding, Clarence E. Rees and Lyell C. Kinney, all from San Diego, were present, also Drs. Charles S. Vivian, William A. Schwartz and William Warner Watkins from Phoenix, and Dr. Charles S. Brooks from El Centro; there was a dinner and a scientific program. Yuma County hopes that the inauguration of this type of joint meeting will be followed by others.——The Cochise County Medical Society recently raised its dues to $12 a year.

CALIFORNIA

Washington Sanipractor Arrested.—Edwin F. Ott, who holds a license to practice sanipractic in the state of Washington, was recently arrested at Riverside, Calif., for violation of the medical practice act. Ott was released without bail pending a hearing, local officials who attended the same church having assured the judge that he would appear; Ott failed, however, to appear for a hearing and was said to have gone back to Washington to resume sanipracticing. The investigation showed that, while at Riverside, Ott had been giving "capsules containing powders and a liquid medicine." Sanipractors are said to be "drugless healers."

Miscellaneous Items.—The city health officer of Los Angeles announced, February 17, that more than 100,000 persons had been vaccinated since the outbreak of smallpox in that city some months ago.——Due to a recent increase in rental for offices, physicians of San Jose are planning to erect a $500,000 medical arts building.——Dr. Charles A. James has been appointed a member of the board of health of Fresno to succeed Dr. William W. Cross, Jr., who has moved to Oakland.——The summer term for postgraduate work at the University of California Medical School, San Francisco, begins June 7 and ends July 3, during which time, courses for qualified graduates in medicine will be offered in a variety of subjects.

ILLINOIS

Personal.—Dr. John W. H. Pollard, formerly of Quincy, has been appointed commissioner of health of Evanston, effective April 1, to succeed Dr. Clarence T. Roome, resigned.——Dr. Elias S. McCord, Delmar, has been appointed coroner of Clinton County.——Dr. Thomas G. Hall has resigned from the Dixon State Hospital to engage in private practice in St. Louis.

Fifty Years in Practice.—Members of the Madison County Medical Society, Edwardsville, held their annual banquet, February 22, at the Country Club to celebrate Dr. Edward W. Fiegenbaum's completion of fifty years in the practice of medicine in Edwardsville. Dr. Benjamin H. King, Granite City, president of the society, was toastmaster; the principal speaker was U. S. Attorney Thomas Williamson; other guests were Dr. Jonathan L. Wiggins, East St. Louis, and Dr. William F. Grinstead, Cairo. Dr. Fiegenbaum, who is secretary of the society, was presented with a watch and chain valued at $250.

Mental Hospital Partially Completed.—Four units of U. S. Veterans' Bureau Hospital no. 105, located opposite the Great Lakes Naval Training Station, were opened March 1, and twenty patients from the state hospital for the insane at Elgin were admitted. The capacity of the hospital when the other units are completed will be 1,000, and mentally ill veterans from Kankakee, Jacksonville, the Edward Hines Hospital, and Camp Custer, Mich., will be transferred to this hospital. The staff at present is said to comprise six physicians, fifteen nurses and other attendants. Dr. Oscar C. Willhite, medical officer in charge, has served in government hospitals at Perryville, Md., Knoxville, Iowa, Ann Arbor, Mich., Lakewood, N. J., and Fort McPherson, Ga.

Chicago

Society News.—Maud Slye, Ph.D., addressed the Chicago Pathological Society, March 8, on "Some Misconceptions Regarding the Relation of Heredity to Cancer and Other Diseases"; Edmond R. Long and Florence B. Seibert, Ph.D., on "The Nature of the Active Principle in Tuberculin," and Dr. Henry C. Sweany on "Mutation Forms of the Tubercle Bacillus."

Personal.—William H. Taliaferro, Ph.D., associate professor of parasitology, University of Chicago, will sail for Tela, Spanish Honduras, March 20, to make a serologic study of malaria; his headquarters will be at the hospital of the United Fruit Company.——Dr. Herman L. Kretschmer has resigned as attending genito-urinary surgeon to the Alexian Brothers Hospital.

KENTUCKY

Miscellaneous Items.—Dr. Clarence J. Broeman, Cincinnati, addressed the Boyd County Medical Society, Ashland, recently, on "Radium Therapy."——The Madison County Medical Society held a tuberculosis clinic at Berea, February 25; the local physicians were assisted by Dr. James S. Lock of the bureau of tuberculosis of the state board of health.——Following the testimony of seven physicians at Ashland, Judge Woods dissolved the order of the court which restrained health officials from vaccinating school children against smallpox, and gave the antis twenty days in which to file briefs in the court of appeals.——The Pikeville General Hospital and the Methodist Hospital, Pikeville, have merged; the patients of the former are being moved to the new building of the Methodist Hospital.——Dr. Henry H. Bishop, Louisville, has resigned from the staff of the urologic department of the City Hospital.

LOUISIANA

Physician Convicted.—Dr. Albert R. Bush, Bassier, was convicted at Shreveport, February 25, it is reported, on five counts of violating the Harrison Narcotic Law. Dr. Bush is the first of several physicians in that vicinity who were charged with violations of the Harrison Narcotic Law to go to trial; he was released under $2,500 bonds, while awaiting sentence (THE JOURNAL, Feb. 28, 1925, and March 21, 1925).

Society News.—Dr. Harry Gideon Wells, professor of pathology, University of Chicago, addressed the Orleans

Parish Medical Society, New Orleans, February 22, on "The Relationship of Heredity to Cancer."——Dr. David E. Brown, Chatham, is now director of tuberculosis control for the Louisiana State Board of Health.——Dr. Carleton Simon, formerly deputy police commissioner of New York City, is in New Orleans to survey the narcotic situation in Louisiana.——Dr. William H. Seemann, New Orleans, has been elected president of the Tuberculosis and Public Health Association of Louisiana, and Drs. Hector E. Bernadas and Homer J. Dupuy, Jr., vice presidents.

MASSACHUSETTS

Hospital News.—Mr. Earle P. Charlton, president of the Charlton Mills, has given to the Truesdale Hospital, Fall River, $500,000, with which it is planned to provide new operating rooms, laboratories, power plant, laundry, kitchen and dining room for nurses.

Boston Medical Library.—At the fiftieth anniversary, recently, of the Boston Medical Library, Dr. George H. Monks was reelected president; Drs. William N. Bullard, Homer Gage and George G. Sears, vice presidents; Dr. Walter L. Burrage, secretary; Dr. Richard G. Wadsworth, treasurer. Dr. John W. Farlow has been the librarian for twenty years.

North Shore Medical Fraternity.—Dr. Ernest Granville Crabtree, Boston, addressed the February meeting of the North Shore Medical Fraternity, Lynn, on "Some Common Conditions in Urology as Seen by the General Practitioner"; Dr. Bernard Goldberg, Boston, addressed the January meeting on "Therapy in Heart Disease"; Dr. Richard H. Miller, Boston, will address the fraternity, March 16, on "Acute Surgical Conditions of the Abdomen."

MICHIGAN

Society News.—The Wayne County Medical Society, Detroit, and the American Congress on Internal Medicine held a joint meeting at the Book-Cadillac Hotel, February 23. The March 2 meeting of the Wayne County Medical Society was "state medical society night"; the program comprised five speakers from the state medical society.

Measles in Infants.—Among 4,384 cases of measles in Detroit, in January, there were forty-six deaths, a mortality rate of 1.05 per 100 cases; 112 of these cases and sixteen of the deaths were in infants under one year of age; 291 cases and thirteen deaths were in children between 1 and 2 years of age. A tabulation by the department of health of the cases and deaths by age shows that the infant is ten times more likely to die from measles than the child of any other age except from 1 to 2.

MISSISSIPPI

Society News.—The Pike County Tuberculosis Association has selected Riverside Lodge, ten miles east of McComb, as the site for the children's health camp next summer, which will be the first county health camp to be organized in Mississippi; the state board of health is cooperating; children who are undernourished and underweight may attend the camp under the supervision of nurses and physicians.

Another Antievolution Bill.—Both houses of the Mississippi legislature recently passed an antievolution bill. Students of the University of Mississippi have petitioned the governor to veto the measure. The petition from the law school students pointed out to the governor that the enactment of this bill would interfere with the higher institutions of learning in the state, particularly those which give courses in the medical sciences. The bill originated in the house; it passed the senate by a vote of twenty-nine to sixteen. The bill provides that the teaching of the theory that man ascended from a lower form of animal life shall be debarred from tax supported schools.

NEW JERSEY

Illegal Practitioners Fined.—Ellsworth Pierce, naturopath, Bridgeton, was tried, recently, in the court of common pleas on a charge of practicing medicine without a license; judgment was entered for the penalty and costs; Frona Bowen, Riverside, has pleaded guilty in the court of common pleas, Mount Holly, to a charge of practicing medicine without a license and paid the penalty; Hugh and Electra Anderton, Jersey City, paid the penalty, January 7, for the same offense.——Vernon P. Cox and Herman Staller, Atlantic City, and George C. Lezenby, Jr., were tried, Nov. 4, 1924, for practicing medicine without a license; they practiced electrotherapy; judgment was entered for the first two cases, and Lezenby paid the penalty.

NEW YORK

Hospital News.—Following the drive for funds in which $1,200,000, was pledged, plans for the new North Country Hospital, Glen Cove, L. I., have been approved; more than $500,000 of the amount pledged has been received.

Society News.—The New York Society for Clinical Psychiatry held its regular meeting, February 11, at the U. S. Veterans' Hospital 81, Sedgwick Avenue and West Kingsbridge Road, Bronx, N. Y. Dr. Chester L. Carlisle and other members of the staff of the hospital held a clinic demonstrating schizoid mechanisms with manic-like syndromes.

New York City

Increase in Rabies.—The New York City Department of Health announces that measures will be taken to enforce rigidly the dog-muzzling ordinance, in view of the increase of rabies in New Jersey and Westchester County. The records of the department show that there has been an increase of more than 100 per cent in the number of dog-bites since 1921, when there were 3,049, as compared with 7,030 in 1925, and that the number of rabid dogs increased from forty-four in 1920 to seventy-six in 1925. A study of these animals shows that the poodle is the most frequent offender. The cooperation of the public is requested in this campaign.

Public Health Reserve Corps Abolished.—Health Commissioner Harris abolished the public health reserve corps of the New York City Department of Health, February 13. The corps is said to have consisted of public groups over which it was necessary for the health department to exercise supervisory functions; the arrangement sometimes embarrassed the health department in enforcing the law. Dr. Harris is anxious to profit by suggestions which groups of citizens may be able to furnish, but he considers that the public health reserve corps performed no function of significance. The residuary fund of the corps, amounting to more than $600, will be distributed equally among Protestant, Catholic and Jewish charities.

Directors of Roentgen-Ray Laboratories.—The board of health, February 6, amended the regulation concerning persons authorized to conduct and maintain roentgen-ray laboratories, so that it now reads: "Every X-ray laboratory shall at all times be in charge of and under the direction of a duly licensed physician or other person who is licensed under the laws of this state to diagnose and to treat diseases, and whose knowledge, experience and qualification to use an x-ray machine are satisfactory to the health department." The change seems to have been brought about by a ruling of the court of appeals which required the department of health to issue a permit to a nonmedical person to whom a permit had previously been denied.

Annual Meeting of Near East Relief.—At the annual convention of Near East Relief, Hotel Pennsylvania, March 4, awards for distinguished service were bestowed on forty-four workers of that organization, among whom were Dr. W. W. Peet, a native of Massachusetts, and many nurses. In the typhus epidemic of 1924, fifteen physicians and nurses of Near East Relief are said to have lost their lives. During 1924, Near East Relief served 68,158 children, variously located in orphanages, homes, native schools, hospitals, refugee camps, industrial groups and clinics, and for the first time in its eight years of service, had a balance at the close of the year. The total receipts for 1925 of the organization were about $4,750,000, and the total amount expended in aiding refugees and orphans, since its organization in 1915, is $81,787,779.

Verdi's Masterpiece to Aid Physicians' Home.—At the benefit performance, Sunday, April 11, the Metropolitan Opera Company will render Verdi's masterpiece, "The Requiem Mass"; the cast will include Signor Beniamino Gigli, Madame Easton, Signor Mardones and Madame Telva, and M. Serafin will conduct with the full Metropolitan orchestra and chorus. The proceeds of this performance will go to purchase the estate of the late Edward M. Knox at Richfield, Conn., for a unit for The Physicians' Home for old and incapacitated physicians and their dependents. The estate can be purchased for $125,000, although it represents a much larger investment. Downsbury Manor, as the place was called, has fifty rooms, is located on a large tract of woodland and meadow with gravel paths, roadways, gardens and farms, among which are scattered fourteen other buildings. The manor is combination stone and shingle. From a tower in the woods the whole estate may be viewed, and, on some days, the view includes parts of the States of Vermont,

Massachusetts, Connecticut and New York. The Hon. George Gordon Battle has accepted the national chairmanship of this movement, the object of which is to provide units of the Physicians' Home in various parts of the country. Boxes and reserve seats for the benefit performance of the Metropolitan Opera Company, April 11, can be had by letter, telephone or telegraph to the Physicians' Home, Inc., 22nd floor, Times Building, Broadway and 42nd Street, New York.

NORTH CAROLINA

Tri-State Meeting.—The Tri-State Medical Association (the Carolinas and Virginia) held its twenty-eighth annual meeting at Fayetteville, February 16-17, under the presidency of Dr. William Lowndes Peple, Richmond, Va.; among others, the governors of North and South Carolina gave addresses; Dr. Andrew J. Crowell, Charlotte, was elected president; Drs. Hugh R. Black, Spartanburg, S. C., Seavy Highsmith, Fayetteville, N. C., and Lawrence T. Price, Richmond, Va., vice presidents, and Dr. James K. Hall, Richmond, Va., secretary-treasurer.

New Law Requires Physicians to Work Without Pay.—The North Carolina legislature, in 1925, amended the law providing for the physical examination of applicants for marriage licenses, so that it now requires physicians to examine these applicants and issue them certificates without charge. The amendment is in part as follows:

"That such certificate shall be executed by some reputable physician licensed to practice medicine and surgery in the State of North Carolina, whose duty it shall be to examine such applicants and issue such certificate without charge: *Provided, however,* that no such certificate shall be valid outside of the county in which such physician resides unless the same shall be accompanied by a certificate of the clerk of the Superior Court of the county in which such physician resides to the effect that the person who signed such certificate is a reputable physician and surgeon actually engaged in the practice of his profession."

This amendment is said to have been introduced by N. A. Townsend of Dunn, and passed just previous to the close of the session.

NORTH DAKOTA

Dr. Carlson to Lecture.—Dr. Anton J. Carlson, professor and chairman of the department of physiology, University of Chicago, will deliver three lectures, March 18, at Grand Forks, on (1) "Science and the Common Life" at the University of North Dakota, (2) "Recent Studies on the Gastro-Intestinal Tract" before Sigma Xi, and (3) "Organotherapy" at a dinner given by the Grand Forks District Medical Society.

OHIO

Personal.—Dr. Royal A. Phillips, Cincinnati, has been granted a fellowship for training in extramural psychiatry by the National Committee for Mental Hygiene; Dr. Phillips is on the staff of the neurologic department of the Cincinnati General Hospital.——Dr. James J. Chandler has resigned as resident medical superintendent of Mount Logan Sanatorium, Chillicothe.——Dr. Walter J. Weiser has been reappointed health commissioner of Marion.——Dr. Oral D. Tatje has been reappointed health commissioner of Portsmouth, and Dr. Treber C. Crawford, city physician.

Health Exhibit a Success.—The medical exhibition conducted at the University of Cincinnati in February had a total attendance of 28,988 persons. There were on exhibition the equipment of modern operating rooms, a demonstration of heliotherapy and of the requirements demanded of medical students during their course of study. A motion picture, "Pilgrim's Progress of a Medical Student" made for this occasion, showed the student's life from matriculation to graduation and was a popular feature. Each department of the university provided demonstrations and lectures. There were also lectures daily on "Health Promotion" illustrated by moving pictures. The mayor of Cincinnati and the president of the university presided at the opening, and representatives from about fifteen medical colleges and many from other cities attended. This, said to be the first exhibition of its kind, was far more successful than was expected by the Public Health Federation, which originated the plans.

OREGON

Society News.—Dr. Louis J. Wolf, Portland, addressed the Portland City and County Medical Society, recently, on "Obstetrics Among the Eskimos."——At a meeting, recently, the Teton County Medical Society was organized; Dr. Harry J. McGregor, Choteau, was elected president, and Dr. George E. Keller, Choteau, secretary-treasurer; meetings will be held the last Friday in each month.

PENNSYLVANIA

The Mellon Lecture.—Dr. George N. Stewart, professor of experimental medicine, Western Reserve University School of Medicine, Cleveland, will deliver the Mellon Lecture of the Biological Society at the Carnegie Institute, Pittsburgh, April 30, 8:15 p. m., on "Studies on the Adrenal Glands."

Personal.—Dr. Charles L. Fullmer has been appointed county medical director of Clinton County by the state secretary of health to succeed the late Dr. Robert B. Watson, Lock Haven.——Dr. Ralph L. Reber has been elected president of the Reading Medical Society, Reading.——Dr. James D. Lewis has been made director of public health of Scranton for 1926.——Dr. Frank B. Witmer has been elected health officer of Lebanon.——Dr. Albert S. Reiter has been elected burgess of the borough of Myerstown.

Diploma and License Stolen.—The state board of medical education and licensure, Harrisburg, reports that the medical diploma and license to practice medicine in Pennsylvania, and the narcotic license of Dr. Warren C. Mercer, 20 South Twenty-First Street, Philadelphia, were stolen from his office several months ago. State boards may be able to locate these credentials, as an attempt may be made to use them fraudulently. Dr. Mercer graduated from Hahnemann Medical College and Hospital of Philadelphia, in 1899, and was licensed in the state the same year.

Philadelphia

Society News.—Dr. David L. Belding, Boston, addressed the Obstetrical Society of Philadelphia, March 4, at the College of Physicians on "The Effect of Treatment of Syphilitic Pregnant Women Upon the Incidence of Congenital Syphilis."——Dr. Jacob Braun, New York, addressed the Philadelphia Laryngological Society, March 2, on "The Surgical Aspects of Tonsillectomy and Its Complications," illustrated with moving pictures; Dr. Samuel R. Skillern, Jr., spoke on "The Anatomy of the Tonsils."

SOUTH CAROLINA

Health Officer Appointed.—Dr. Francis M. Munson, New Orleans, has taken up the duties of health officer of Sioux Falls. Dr. Munson is a graduate of the Medico-Chirurgical College, Philadelphia, and of the navy medical school, Washington, D. C.; he was in the navy medical corps for about thirteen years, including the period of the World War, was on the faculty of the School of Medicine of Georgetown University, Washington, D. C., for several years and later was health unit director for the Louisiana State Board of Health.

TENNESSEE

Appeal for Funds for Meharry Medical College.—Meharry Medical College, Nashville, is now a Class A medical school, the only one in the southern section of the United States where negroes can obtain a medical education. The school has a great work to do in the training of physicians to serve 10,000,000 negroes, but it is handicapped by a lack of funds. Next October, when the college celebrates its fiftieth anniversary, an appeal for contributions to an endowment fund will be made to its alumni and to the negro race. The president of Meharry Medical College, Dr. John J. Mullowney, believes that many other members of the medical profession will be willing to help this institution; he will gladly give information concerning the work of the college, and, with many others, will appreciate contributions to the endowment fund. Checks may be forwarded to the treasurer of the college, Mr. George W. Claridge, Nashville, Tenn.

CANADA

Personal.—Dr. Eric K. Clarke, Toronto, has been granted a fellowship for training in extramural psychiatry by the National Committee for Mental Hygiene; Dr. Clarke is director of the psychiatric clinic of the Toronto General Hospital.

Society News.—Dr. James Tate Mason, Seattle, addressed the Vancouver Medical Association, Vancouver, February 2, on "Surgical Treatment of Thyroid Diseases," and in the morning held a clinic at the Vancouver General Hospital. Dr. Lester J. Palmer, Seattle, gave an address on "Some Phases of the Diabetic Situation."

The Osler Lecture.—Dr. Edwin D. Carder delivered the Osler Lecture for 1926 before the Vancouver Medical Association, March 2, on "The Thymus"; an informal dinner at the University Club, Vancouver, preceded the meeting; Drs. Henry E. Young and Cyril Wace of Victoria were guests of the association. The annual meeting will be held, April 20.

GENERAL

Committee of International Stomatological Congress.—The American Committee of the International Stomatological Association for the next international congress in Paris in 1927 comprises, among others, Dr. Edward C. Rosenow, scientific research; Dr. Joseph C. Bloodgood, Baltimore, clinical stomatology; Dr. Oliver T. Osborne, Hartford, Conn., education and legislation; Dr. William G. Shemeley, Jr., public health and lay education; Dr. George W. MacKenzie, history of stomatology, and Dr. Anthony Bassler, bibliography and nomenclature. Dr. George Reese Satterlee is treasurer of the committee, and Alfred J. Asgis, D.D.S., chairman.

Biennial Convention of Nurses.—The three national nursing organizations, American Nurses' Association, the National League of Nursing Education and the National Organization for Public Health Nursing, will hold their biennial convention at Atlantic City, May 17-22, during which week the American Health Congress, comprising thirteen other health organizations, will be held. Some subjects for discussion will be "Legislation and the Profession," "The Nursing of People Who Are Mentally Ill," "Milestones in Nursing," "The Normal Preschool Child," "Trends in Public Health Nursing Education," and "What the Nurse Can Give to Industry." This is expected to be the largest gathering of professional women ever held in this country. There are said to be about 200,000 nurses in the United States, and about 1,700 nursing schools.

Last Year's Smallpox.—The American Association for Medical Progress, New York, has compiled from *Public Health Reports* the number of cases of smallpox during 1925. There were, it appears, 33,200 cases in thirty-eight states and the District of Columbia for which figures were available; this denotes a decline of about 10,000 in the number of cases over the preceding year. In fourteen states, however, there was an actual increase of 5,400 cases over the preceding year, and in Alabama alone an increase from 2,042 to 4,275. In eight states and the District of Columbia only one case was reported during the last four months of 1925. California led all these states in the aggregate number of cases, as it did in 1924; California also showed the best absolute report in the number of cases, the reduction being from 9,425 cases to 4,919. Vermont did not report a single case of smallpox in 1925, and only sixty-four in 1924.

Societies Merge.—At the annual meeting, Detroit, February 26, the American Congress on Internal Medicine announced that it had merged with the American College of Physicians in a body to be known as the Clinical Congress of the American College of Physicians, which will have the same function as the former congress. Members of the Congress on Internal Medicine will automatically become associates of the American College of Physicians, in which there will be, henceforth, three classes of members, masters, fellows and associates; a fourth class of membership in the college to be known as "associates" was created for younger physicians, who, after a five year training period, will be given an opportunity to qualify as fellows. Dr. Alfred Stengel, Philadelphia, was elected president of the American College of Physicians; Dr. Frank Smithies, Chicago, president-elect; Drs. Aldred S. Warthin, Ann Arbor, Charles F. Martin, Montreal, and Stewart R. Roberts, Atlanta, Ga., vice presidents. One hundred and twenty-five new fellows were inducted into the college.

Stream Pollution by Industrial Wastes.—More than 9,000,000 tons of sulphuric acid is dumped annually into the streams of Pennsylvania; its source is in waste mine waters. Among more than 300 mines in the state only four, according to a report by the department of commerce, showed water which was not acid. Ohio and West Virginia are seriously affected in this way, also. There are, the report states, 250 water supplies throughout the United States and Canada that are affected by industrial wastes, and Pennsylvania alone has 138 water supplies affected. There are no fish in the Monongahela, very few in the Allegheny, and none in the Ohio River until after the Little Kanawha enters at Parkersburg, W. Va. While coal mines are a great source of acid waste, large quantities of acid are discharged from such industries as tube, sheet, tin-plate and enameling works. Few attempts have been made to prevent acid waters from entering streams, and the making of regulations to govern such wastes will require a thorough study of the subject. The neutralization of acid mine waters will require the expenditure of great sums of money, but the report considers that it does not seem prohibitive in most cases; whether this will be a sound policy will depend on the collection of more data than are available now.

Report of Committee on Supernormal Phenomena.—The committee appointed by the *Journal of Abnormal and Social Psychology* to investigate claims of mediums regarding supernormal material phenomena, and to award $5,000 to any person who would demonstrate such phenomena under rigid conditions, has rendered a report. The committee comprised Dr. Simeon Burt Wolbach, Harvard University, secretary; Dr. Walter B. Cannon, Harvard University Medical School; Harlow Shapley; Theodore Lyman; C. C. Pratt, and Harry Houdini. They state that forty-four persons responded to the announcement of the prize, but that only three persons made pretense of seriously entering the competition. There were fourteen letters from persons obviously psychopathic, seven, probably all from mediums, protesting against the conditions governing the proposed award; four from persons who were rather intimate with ghosts, who disclaimed any desire to compete but wished to tell their experiences; one was from a person in England claiming to be able to convert psychic energy into physical energy; another, from this country, was from the only individual who sent an affidavit from an observer at home; he was the only correspondent that required action by the committee as a whole. The committee finally regarded this person as ineligible. It may be significant, the committee concludes, that no groups of investigators of supernormal phenomena produced a candidate.

New County Society Presidents.—The following physicians have recently been elected presidents of the county medical societies indicated:

Dr. William J. Cranston, Augusta, Ga., Richmond County Medical Society.
Dr. Ralph O. Crume, Fort Scott, Kan., Bourbon County Medical Society.
Dr. Erle O. Daniels, Marion, Ind., Grant County Medical Society.
Dr. Wallace N. Davidson, Cushing, Okla., Payne County Medical Association.
Dr. Edgar F. Dodds, Tacoma, Wash., Pierce County Medical Society.
Dr. William P. Greening, Pauls Valley, Okla., Garvin County Medical Society.
Dr. Thomas Y. Greet, Gadsden, Ala., Etowah County Medical Association.
Dr. Joseph A. Guthrie, Huntington, W. Va., Cabell County Medical Society.
Dr. Joseph E. J. Harris, Albuquerque, N. M., Bernalillo County Medical Association.
Dr. James E. Hennessy, Emmetsburg, Iowa, Palo Alto County Medical Society.
Dr. Clement V. Hiestand, Campbellsville, Ky., Taylor County Medical Society.
Dr. LeRoy Jones, Hoopeston, Ill., Hoopeston County Medical Society.
Dr. Charles D. Humbert, Barnard, Mo., Nodaway County Medical Society.
Dr. Joseph W. Laughlin, Elm Creek, Neb., Buffalo County Medical Society.
Dr. Francis M. Link, Paris, Ill., Edgar County Medical Society.
Dr. William Mason, Stamping Ground, Ky., Scott County Medical Society.
Dr. William J. Maurits, Morrison, Ill., Whiteside County Medical Society.
Dr. Frank P. McCarthy, Erie, Pa., Erie County Medical Society.
Dr. C. H. McCaslin, Stanberry, Mo., Gentry County Medical Association.
Dr. Claudius E. McConnell, Mangham, La., Richland Parish Medical Society.
Dr. W. F. McNary, East St. Louis, Ill., St. Clair County Medical Society.
Dr. Edward R. Michaux, Greensboro, N. C., Guilford County Medical Society.
Dr. William D. Mixson, Waycross, Ga., Ware County Medical Society.
Dr. Samuel A. Morrall, Graniteville, S. C., Aiken County Medical Society.
Dr. Edward K. Morris, Merrell, Wis., Lincoln County Medical Society.
Dr. Patrick I. Nixon, San Antonio, Texas, Bexar County Medical Society.
Dr. Charles E. Reddick, Paducah, Ky., McCracken County Medical Society.
Dr. Dalton Richardson, Austin, Texas, Travis County Medical Society.
Dr. Felix C. Rykken, Bellingham, Wash., Whatcom County Medical Society.
Dr. Albanus S. Ryland, Pottsville, Pa., Schuylkill County Medical Society.
Dr. Harvey W. Saylor, Bruning, Neb., Thayer County Medical Society.
Dr. Crandall P. Sisco, Springdale, Ark., Washington County Medical Society.
Dr. Hardy H. Smith, Jr., Fort Smith, Ark., Sebastian County Medical Association.
Dr. Asa H. Speer, Corpus Christi, Texas, Nueces County Medical Association.
Dr. Solomon E. Spratt, Mount Sterling, Ky., Montgomery County Medical Society.
Dr. George T. Tyler, Greenville, S. C., Greenville County Medical Society.
Dr. Samuel C. Waters, Middletown, Ind., Henry County Medical Society.
Dr. Edward H. Weld, Rockford, Ill., Winnebago County Medical Society.
Dr. Robert E. Windham, Longview, Wash., Cowlitz County Medical Society.
Dr. James E. Woelfle, Cairo, Ill., Alexander County Medical Society.
Dr. William K. Wright, Manistique, Mich., Schoolcraft County Medical Society.

PHILIPPINE ISLANDS

Medical Election.—At the annual meeting of the Philippine Islands Medical Association, Manila, Dec. 18, 1925, Dr. Carmelo M. Reyes was elected president, Drs. Arturo Garcia and Gregorio Singian, vice presidents, and Dr. Isabelo Concepcion, secretary-treasurer. The next annual meeting will be in Manila, Dec. 14-17, 1926.

CUBA

Typhoid Outbreak.—One hundred and thirty cases of typhoid and twelve deaths have been reported at Colon, not far from Havana. Compulsory antityphoid vaccination has been enforced, and soldiers are on guard to prevent uninoculated persons from entering or leaving Colon.

Repair of Children's Asylums.—Director Pine, of the section of philanthropy of the sanitation department, has announced that the $10,000 at the disposal of the maternity and child welfare protection committee will be applied to the repair of the Habana-Nueva-Creche and other benefit asylums for children in Habana. Director Pine is drawing up plans for improving crèches run by private charity which would provide them with a $15 subvention for each child cared for.

PORTO RICO

Tuberculosis Dispensaries.—The bureau of tuberculosis of the department of health, Porto Rico, has recently opened two tuberculosis dispensaries, one at Coamo and the other at Yauco; there are now eleven tuberculosis dispensaries operating in Porto Rico.

New Municipal Hospitals.—During the last two years, twelve new municipal hospitals have been constructed in various towns in Porto Rico to replace old and inadequate structures. The most recent new municipal hospital to be inaugurated is one at Aguadilla, which is modern in every way, and equipped to meet the accepted hospital standards.

Child Welfare Board.—The last session of the legislature of Porto Rico passed a law creating a child welfare board, which shall consist of five members, two of whom shall be mothers of families, to be appointed by the governor of Porto Rico with the consent of the senate, for a term of two years. The commissioners of health and education shall be ex officio members of the board, but shall have only a voice in its deliberations. The board shall have charge of the study of all problems affecting childhood; it will revise all present laws affecting childhood, inspect all institutions now or hereafter to be established to benefit the children of Porto Rico, and shall report to the legislature concerning the operations of such institutions every two years. At the first meeting of the board, recently, Dr. Antonio Fernós Isern was elected president.

FOREIGN

Typhoid in Tokyo.—From January 1 to January 11 there were 199 cases of typhoid in Tokyo, which was sixty-nine more than in the corresponding period last year.

Cholera in Japan.—The total number of cases of cholera in Japan in 1925 was 640; they were scattered over more than half of the provinces and the death rate was about 60 per cent; during the year, 221 cholera carriers were discovered.

Fund for Medical School.—The Rockefeller Foundation, New York, has granted 3,000,000 francs to the faculty of medicine of Strasbourg to build an institute of histology and an otolaryngologic clinic and to subsidize research workers.

Cults in Asia Minor.—The *Deutsche medizinische Wochenschrift* publishes a notice from Angora to the effect that the Turkish government has prohibited all kinds of medical cults from practicing the healing arts. The local authorities are enjoined to arrest the cultist at once if he attempts healing by prayer and to take him to the workhouse.

Measles in Palestine.—Measles is the most serious epidemic disease occurring in Palestine, according to the health section of the League of Nations. There were 6,936 cases reported in the 1924 epidemic, 1,232 of which were fatal. The 1923 measles outbreak coincided with a severe epidemic in Egypt. Scarlet fever is of rare occurrence in Palestine as well as in Egypt; so is diphtheria. Smallpox is well under control, but the incidence of chickenpox is increasing.

The Plague Situation.—The plague situation in Asiatic ports remained favorable during December, 1925; in only seven of the thirty-nine ports from which reports were received by the health section of the League of Nations did plague occur and, in them, not more than three cases in any port during any week; human plague was reported in only two of the thirty-one ports outside Asia from which reports were received. While 4,794 cases were reported in British India with 3,259 deaths for the four weeks ending November 14, that was less than half the number of cases reported during the corresponding period in 1924. It is said that the present plague year ending next June will probably be among the most favorable in the history of the present pandemic in India. There was little plague in the Mediterranean area also during December, and no case in Egypt in the last four weeks of 1925. Port Said had been free from plague since November 8 and Suez since October 2. There were 138 cases in all in Egypt during 1925, which is the lowest annual figure since the disease was introduced in that country with the exception of 1899 and 1900.

Government Services

U. S. Public Health Service

Surg. David Columbus Turnipseed, Jr., and Acting Asst. Surg. James S. Wheeler have been relieved from duty at Quarantine, La., and directed to proceed to New Orleans to establish headquarters for the conduct of quarantine activities of the port of New Orleans.——Senior Sanitary Engineer J. A. LePrince was authorized to proceed from Memphis, Tenn., to Chicago, January 4, concerning an antimosquito campaign to be carried on around Chicago next spring.——Surg. Charles Armstrong has been directed to proceed from time to time during the present fiscal year from Washington, D. C., to such places in the United States as may be necessary to investigate complications associated with vaccination against smallpox.——Asst. Surg. Adolph S. Rumreich has been relieved from duty at Los Angeles, and assigned to duty at Rolla, Mo., in connection with the epidemiologic study of trachoma.——Surg. John McMullen was directed, January 25, to proceed from New Orleans to Jacksonville, Fla., and return to confer with the state health officer about an outbreak of smallpox in Florida.——Surg. Joseph Goldberger was directed, January 26, to proceed from Washington, D. C., to Milledgeville, Ga., and return in connection with pellagra investigations.——Surg. George W. McCoy was detailed as a representative of the public health service at the annual meeting on Medical Education, Medical Licensure and Hospitals of the American Medical Association, Chicago, February 15-18.——Dr. Jesse T. Harper, Dr. Felix R. Brunot and Dr. John W. Harned, Jr., have been commissioned in the grade of assistant surgeon, effective on the date of oath.

Loss of Pay for Absence from Duty

The Senate Committee on Military Affairs has approved and favorably reported to the Senate a bill for the forfeiture of pay of persons in the military and naval service who are absent from duty on account of the direct effects of the intemperate use of alcoholic liquor or habit-forming drugs or because of venereal disease. The bill amends existing laws on this subject in certain particulars, which are described in detail in a letter of Secretary of War Dwight F. Davis, to the Chairman of the Senate Committee on Military Affairs.

Army Orders

According to the New York *Times*, orders have been issued transferring Major Milton W. Hall, Medical Corps, from the Philippines to Fort Bliss, Texas; Major Albro L. Parsons to sail for Manila about March 12; Capt. Charles F. Shook to sail for Honolulu about April 27; Capt. Verner T. Scott from the Hawaiian Department to the Army Medical School, Washington, D. C.; Capt. Victor N. Meddis to sail from New York about March 12 for China. Major John W. Watts has been detailed to Chicago for recruiting duty; Capt. Everett Le C. Cook to the Army Medical School, Washington, D. C.; Capt. Carl R. Mitchell to Fort Bragg, N. C., and Capt. James C. Kimbrough and Lieuts. Douglas S. Kellogg and Berna T. Bowers to the Letterman General Hospital, San Francisco; Major Lucius L. Hopwood has been ordered to the New York General Intermediate Depot for duty.

THE DALLAS SESSION

AMERICAN MEDICAL ASSOCIATION, SEVENTY-SEVENTH ANNUAL SESSION DALLAS, APRIL 19-23, 1926

OFFICIAL CALL

TO THE OFFICERS, FELLOWS AND MEMBERS OF THE AMERICAN MEDICAL ASSOCIATION

The seventy-seventh annual session of the American Medical Association will be held in Dallas, April 19-23, 1926.

The House of Delegates will convene at 10 a. m., Monday, April 19. In the House the representation of the various constituent associations for 1926, 1927 and 1928 is as follows:

Alabama	3	New Hampshire	1
Arizona	1	New Jersey	3
Arkansas	2	New Mexico	1
California	5	New York	14
Colorado	2	North Carolina	3
Connecticut	2	North Dakota	1
Delaware	1	Ohio	7
District of Columbia	1	Oklahoma	3
Florida	1	Oregon	1
Georgia	3	Pennsylvania	10
Idaho	1	Rhode Island	1
Illinois	10	South Carolina	2
Indiana	4	South Dakota	1
Iowa	4	Tennessee	3
Kansas	3	Texas	6
Kentucky	3	Utah	1
Louisiana	2	Vermont	1
Maine	2	Virginia	3
Maryland	2	Washington	2
Massachusetts	6	West Virginia	2
Michigan	5	Wisconsin	3
Minnesota	3	Wyoming	1
Mississippi	2	Alaska	1
Missouri	5	Canal Zone	1
Montana	1	Hawaii	1
Nebraska	2	Philippine Islands	1
Nevada	1	Porto Rico	1

The fifteen scientific sections of the American Medical Association, the Medical Department of the Army, the Medical Corps of the Navy and the Public Health Service are entitled to one delegate each.

The Scientific Assembly of the Association will open with the general meeting to be held at 8:30 p. m., Tuesday, April 20. The sections will meet Wednesday, Thursday and Friday, April 21, 22 and 23, as follows:

CONVENING AT 9 A. M., THE SECTIONS ON

- Surgery, General and Abdominal.
- Ophthalmology.
- Diseases of Children.
- Pharmacology and Therapeutics.
- Nervous and Mental Diseases.
- Dermatology and Syphilology.
- Gastro-Enterology and Proctology.
- Radiology.

CONVENING AT 2 P. M., THE SECTIONS ON

- Practice of Medicine.
- Obstetrics, Gynecology and Abdominal Surgery.
- Laryngology, Otology and Rhinology.
- Pathology and Physiology.
- Urology.
- Orthopedic Surgery.
- Preventive and Industrial Medicine and Public Health.

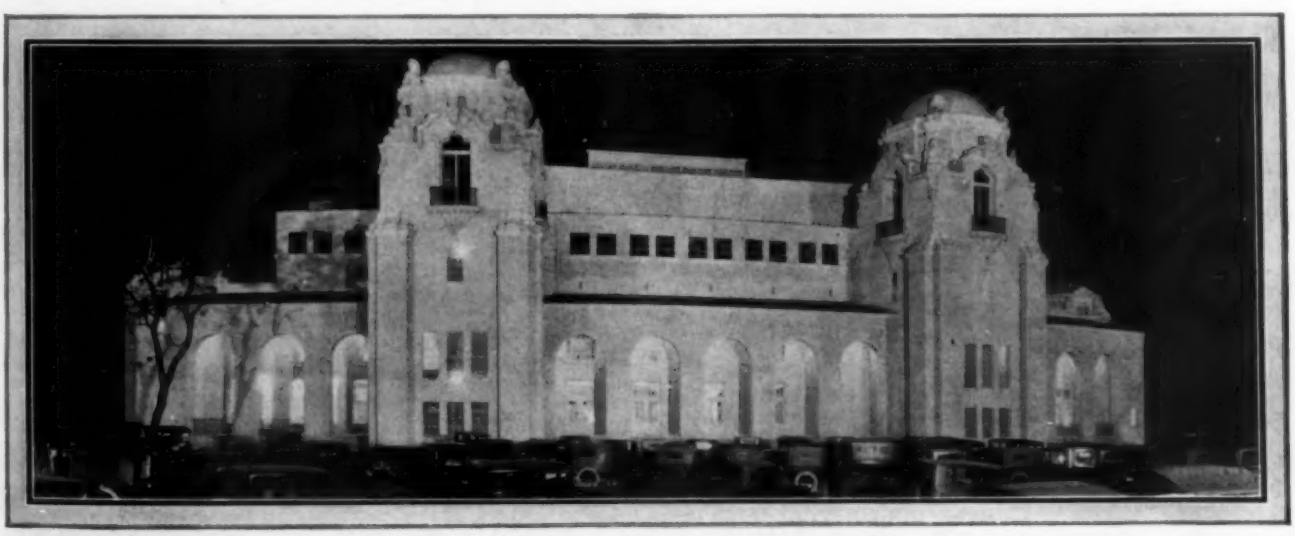
The Registration Department will be open from 8:30 a. m. until 5:30 p. m., Monday, Tuesday, Wednesday and Thursday, April 19, 20, 21 and 22, and from 8:30 a. m. to 12 noon, Friday, April 23.

WILLIAM D. HAGGARD, President.
FREDERICK C. WARNSHUIS, Speaker, House of Delegates.
OLIN WEST, Secretary.

MEMBERS OF THE HOUSE OF DELEGATES

A Preliminary Roster of the Legislative Body of the American Medical Association

The list of members of the House of Delegates for the session is incomplete, as a number of the state associations are yet to hold their meetings at which delegates will be



THE FAIR PARK AUDITORIUM

Here the sections on Practice of Medicine and Diseases of Children will meet.

elected. The following is a list of the holdover delegates and of the newly elected members who have been reported to the Secretary in time to be included:

STATE DELEGATES

ALABAMA
A. A. Walker, Birmingham.
W. M. Cunningham, Corona.
S. W. Welch, Montgomery.

ARIZONA

ARKANSAS
William Turner Wootton, Hot Springs National Park.
William R. Bathurst, Little Rock.

CALIFORNIA
Hans Lisser, San Francisco.
Victor G. Vecki, San Francisco.
Albert Soiland, Los Angeles.
Robert V. Day, Los Angeles.
Lemuel P. Adams, Oakland.

COLORADO
C. N. Meader, Denver.
L. H. McKinnie, Colorado Sp'gs.

CONNECTICUT
Walter Ralph Steiner, Hartford.

DELAWARE
W. O. La Motte, Wilmington.

DISTRICT OF COLUMBIA
W. Gerry Morgan, Washington.

FLORIDA
H. Marshall Taylor, Jacksonville.

GEORIGIA
Allen H. Bunce, Atlanta.
Cleveland Thompson, Millen.

IDAHO
George R. Proctor, Nampa.

ILLINOIS
E. P. Sloan, Bloomington.
T. O. Freeman, Mattoon.
C. J. Whalen, Chicago.
Emmet Keating, Chicago.
R. W. McInnes, Belvidere.
E. W. Fiegenbaum, Edwardsville.
J. W. Van Derslice, Oak Park.
Charles E. Humiston, Chicago.
H. M. Camp, Monmouth.
William Allen Pusey, Chicago.

INDIANA
J. Rilus Eastman, Indianapolis.
David Ross, Indianapolis.
George F. Keiper, La Fayette.
A. E. Bulson, Jr., Fort Wayne.

IOWA
Donald Macrae, Jr., Council Bluffs.
Bert L. Eiker, Leon.
M. N. Voldeng, Woodward.
William Jepson, Sioux City.

KANSAS
E. D. Ebright, Wichita.
Alfred O'Donnell, Ellsworth.
F. A. Carmichael, Osawatomie.

KENTUCKY
*F. A. Stine, Newport.
A. T. McCormack, Louisville.
H. A. Davidson, Louisville.

LOUISIANA
W. H. Seemann, New Orleans.
S. M. Blackshear, New Orleans.

MAINE
Bertram L. Bryant, Bangor.

MARYLAND
Thomas S. Cullen, Baltimore.
Charles O'Donovan, Baltimore.

MASSACHUSETTS
H. G. Stetson, Greenfield.
C. E. Mongan, Somerville.
J. F. Burnham, Lawrence.
F. B. Lund, Boston.
E. F. Cody, New Bedford.
R. I. Lee, Boston.

MICHIGAN
A. W. Hornbogen, Marquette.
J. D. Brook, Grandville.
George E. Frothingham, Detroit.
F. C. Warnshuis, Grand Rapids.
Carl F. Moll, Flint.

* Deceased.

MINNESOTA
J. L. Rothrock, St. Paul.
T. L. Chapman, Duluth.
J. C. Litzenberg, Minneapolis.

MISSISSIPPI
Henry Boswell, Sanatorium.
S. W. Johnston, Vicksburg.

MISSOURI
G. Wilse Robinson, Kansas City.
W. J. Ferguson, Sedalia.
E. J. Goodwin, St. Louis.
J. C. Lyter, St. Louis.
F. M. McCallum, Kansas City.

MONTANA
Creswell T. Pigot, Roundup.

THE CANYON OF DALLAS

NEBRASKA
R. W. Fouts, Omaha.
A. D. Dunn, Omaha.

NEVADA
C. E. Piersall, Reno.

NEW HAMPSHIRE
D. E. Sullivan, Concord.

NEW JERSEY
Wells P. Eagleton, Newark.
John F. Hagerty, Newark.
Henry B. Costill, Trenton.

NEW MEXICO
H. A. Miller, Clovis.

NEW YORK
Owen E. Jones, Rochester.
Arthur W. Booth, Elmira.
*Grover W. Wende, Buffalo.
Grant C. Madill, Ogdensburg.
William F. Campbell, Brooklyn.

NORTH CAROLINA
W. S. Rankin, Raleigh.
M. L. Stevens, Asheville.
W. D. James, Hamlet.

NORTH DAKOTA
E. A. Pray, Valley City.

OHIO
Wells Teachnor, Sr., Columbus.
Ben R. McClellan, Xenia.
George E. Follansbee, Cleveland.
John P. DeWitt, Canton.
W. D. Haines, Cincinnati.
H. M. Hazelton, Lancaster.
E. R. Brush, Zanesville.

OKLAHOMA
W. Albert Cook, Tulsa.
McLain Rogers, Clinton.
C. A. Thompson, Muskogee.

OREGON
William Kuykendall, Eugene.

PENNSYLVANIA
W. F. Donaldson, Pittsburgh.
J. Norman Henry, Philadelphia.
Samuel P. Mengal, Wilkes-Barre.
Charles C. Cracraft, Claysville.
J. N. Hunsberger, Norristown.
William H. Mayer, Pittsburgh.
John A. Campbell, Williamsport.
Arthur E. Crow, Uniontown.
John H. Murray, Punxsutawney.
Orlando H. Petty, Philadelphia.

RHODE ISLAND
Roland Hammond, Providence.

SOUTH CAROLINA
E. A. Hines, Seneca.

SOUTH DAKOTA
G. G. Cottam, Sioux Falls.

TENNESSEE
Jere L. Crook, Jackson.
J. A. Witherspoon, Nashville.
H. L. Fancher, Chattanooga.

TEXAS
J. W. Burns, Cuero.
A. C. Scott, Temple.
Holman Taylor, Fort Worth.

UTAH
E. M. Neher, Salt Lake City.

VERMONT
W. G. Ricker, St. Johnsbury.

VIRGINIA
S. S. Gale, Roanoke.
Hunter H. McGuire, Winchester.
Southgate Leigh, Norfolk.

WASHINGTON
D. E. McGillivray, Port Angeles
Frederick Epplen, Spokane.

WEST VIRGINIA
J. R. Bloss, Huntington.
H. P. Linsz, Wheeling.

WISCONSIN
Rock Sleyster, Wauwatosa.
H. M. Brown, Milwaukee.
Joseph F. Smith, Wausau.

WYOMING
George P. Johnston, Cheyenne.

ALASKA

HAWAII
F. J. Pinkerton, Honolulu.

ISTHMIAN CANAL ZONE

PHILIPPINE ISLANDS

PORTO RICO
Jorge del Toro, Santurce.

GOVERNMENT SERVICES
United States Army, R. F. Metcalfe.
United States Public Health Service, W. F. Draper.

DELEGATES FROM THE SECTIONS

PRACTICE OF MEDICINE
Henry A. Christian, Boston.

SURGERY, GENERAL AND ABDOMINAL
Dean Lewis, Baltimore.

OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY
John O. Polak, Brooklyn.

OPHTHALMOLOGY
W. H. Wilder, Chicago.

LARYNGOLOGY, OTOLOGY AND RHINOLOGY
Burt R. Shurly, Detroit.

DISEASES OF CHILDREN
I. A. Abt, Chicago.

PHARMACOLOGY AND THERAPEUTICS
Paul D. White, Boston.

PATHOLOGY AND PHYSIOLOGY
D. J. Davis, Chicago.

NERVOUS AND MENTAL DISEASES
T. B. Throckmorton, Des Moines.

DERMATOLOGY AND SYPHILOLOGY
Howard Fox, New York.

PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH
W. S. Leathers, Nashville.

UROLOGY
A. L. Chute, Boston.

ORTHOPEDIC SURGERY
H. W. Orr, Lincoln, Neb.

GASTRO-ENTEROLOGY AND PROCTOLOGY
E. H. Terrell, Richmond, Va.

RADIOLOGY

SO THIS IS DALLAS!

Things That Ought to Be Known About the Convention City

About the middle of the sixteenth century a small group of adventurous Spaniards, under Cortez, conquered the empire of Mexico. Until about a hundred and fifty years later what is now known as Texas had neither name nor established borders. After name and borders had been given her, Texas endured the yoke of Spain for another century. In 1822 the first settlers from the United States came to Texas and fourteen years later, on the bloody San Jacinto battleground, the Lone Star State was born.

One day in November, seven years after the events recorded, John Neely Bryan, a hardy young Tennesseean, camped one night on the banks of the Trinity River and in the neighborhood of the present city of Dallas. What consideration caused him to pick this particular spot can, of course, only be guessed. It is interesting to wonder, though, whether the destiny of a great city depended that November day on a whim of chance or on some deep foresight, which perhaps subconsciously stayed the young pioneer in his journey. The settlement was named after George Mifflin Dallas, vice president of the United States under the Polk administration. Whatever the cause may have been, the spirit of John Neely Bryan and those that followed him has survived and flourished. The fellowship of those early pioneers has been perpetuated in the famous Dallas spirit of hearty welcome and warm hospitality.

The outside world thinks of Dallas as a commercial center. True, the growth of the city has been an answer to the commercial needs of the territory which it serves; but Dallas is a well rounded city, and as there is romance in the rise of every successful business man, so is there the fire of accomplishment in the progress of the key city of an inland empire.

A DALLAS SKYLINE

SPEAKING OF TEXAS

Before being told about Dallas, one should know something of the state called Texas, whose name is linked with all that is gigantic. Gigantic in size, wealth and productivity, it feeds, clothes and makes rich a constantly growing population. Speaking of its size, Pat M. Neff, ex-governor of the state, said on one occasion:

"Come to Texas and we will show you the largest cow and horse ranch in the world. It takes 400 miles of fence to enclose it, and when a neighboring Romeo desires to call on the Juliet of that cow ranch, he enters the front gate and rides 10 miles before he can sing his amorous ode beneath the window of the cow-ranch home. And when the ice man comes he drives through the back-yard gate and then journeys 30 miles before he reaches the kitchen cooler. Come to Texas and we will take you to San Angelo, the largest local wool market in the world, and show you a sheep ranch larger than Rhode Island; we will take you to Laredo, where during one season, and they have four a year in Texas, 1,500 carloads of onions were shipped. Last year Texas raised enough onions to flavor the salads and perfume the breath of the human race. When these Bermuda beauties of the Rio Grande made their debut in the horticultural society of this country, the mild-eyed Irish potato shed tears, the beet crop hid its blushing face, and the cabbage fields bowed their heads in envy of this sweet-scented, golden slippered Cinderella of the Southwest. Everything in Texas is rich and productive. Our horses wear checks on their heads, our chickens have bills, our chimneys have drafts and, without considering our politicians, every man who has energy enough to push a lawn mower gets a rake-off. We shipped last year a carload of hens to Chicago, and they laid enough eggs on the road to pay the freight. We have lumber enough to house the homeless, and farm products enough to feed the hungry of the human race."

THE BUSINESS OF DALLAS

Now the chances are that the Romeo mentioned ordered his guitar from a Dallas music house, while Juliet, all dressed up in her Sunday best, is following the dictates of Dallas style creations. From the tools to cultivate the onion crop to the liquid for that "insidious thing," Dallas helps supply the needs of the eleven million people who call the Southwest their home.

It is no wonder, then, that Dallas, with such a wide and prolific trade territory, should have a wholesale district with more than 500 concerns, an industrial section containing 700 factories, and be able to call itself the leading manufacturing city of Texas and the fifteenth jobbing market in the United States. Dallas makes nearly half of the cotton gins of the world and also leads in saddlery, harness and leather goods. Governor Neff, when speaking of cow ranches, was not referring to the section of the state in which Dallas is located. This city is in the midst of one of the richest agricultural sections of the world, and more than two million people live within a hundred mile radius of this city. Its own population is approximately 250,000.

The business streets of Dallas are lined with towering skyscrapers, which have gained for this city the title of possessing the second most impressive skyline in America. In Dallas' canyon-like streets there flows a traffic as heavy as the loop district in Chicago or Fifth Avenue in New York.

AMUSEMENTS ARE PLENTY

Although the waves of a rising tide of commerce have swept prosperity toward Dallas, its people have not forgotten that the hours of rest should be as well provided for as the hours of work.

There are so many good theaters in Dallas that the visitor can always find a play or a picture show to suit him and make his evenings pleasant.

In every section of the city there are fine parks equipped with playground apparatus for the young, and tennis courts and swimming pools for the grown-ups. There is no section that is not served by a park within easy walking distance. Among those most worthy of mention are Ferris Plaza, just in front of the Union Station, where at night the incoming visitor is welcomed by the myriad-colored rays of an electrically illuminated fountain, and Marsalis Park, with its zoo, which ranks as the largest and best in a city the size of Dallas, and contains many unevoluted specimens. White Rock, a six billion gallon water reservoir, is shortly to be turned into a pleasure resort, where even now the followers of Isaac Walton may test their skill to the utmost. There are municipal and private bathing pools, a baseball team, two libraries, and thirty-six motion picture houses.

Almost 300 miles of paved streets wind through the beautiful park system and splendid residential sections of this city. The county in which Dallas is located has more than a thousand miles of surfaced highways, making motoring a thing of unalloyed pleasure.

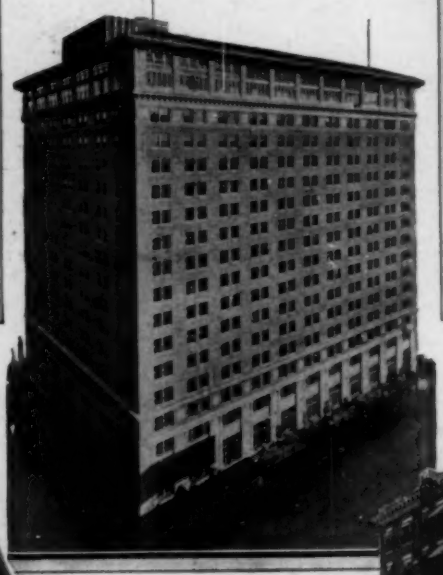
THE JEFFERSON

THE MILAM

THE ADOLPHUS

THE HILTON

THE SCOTT

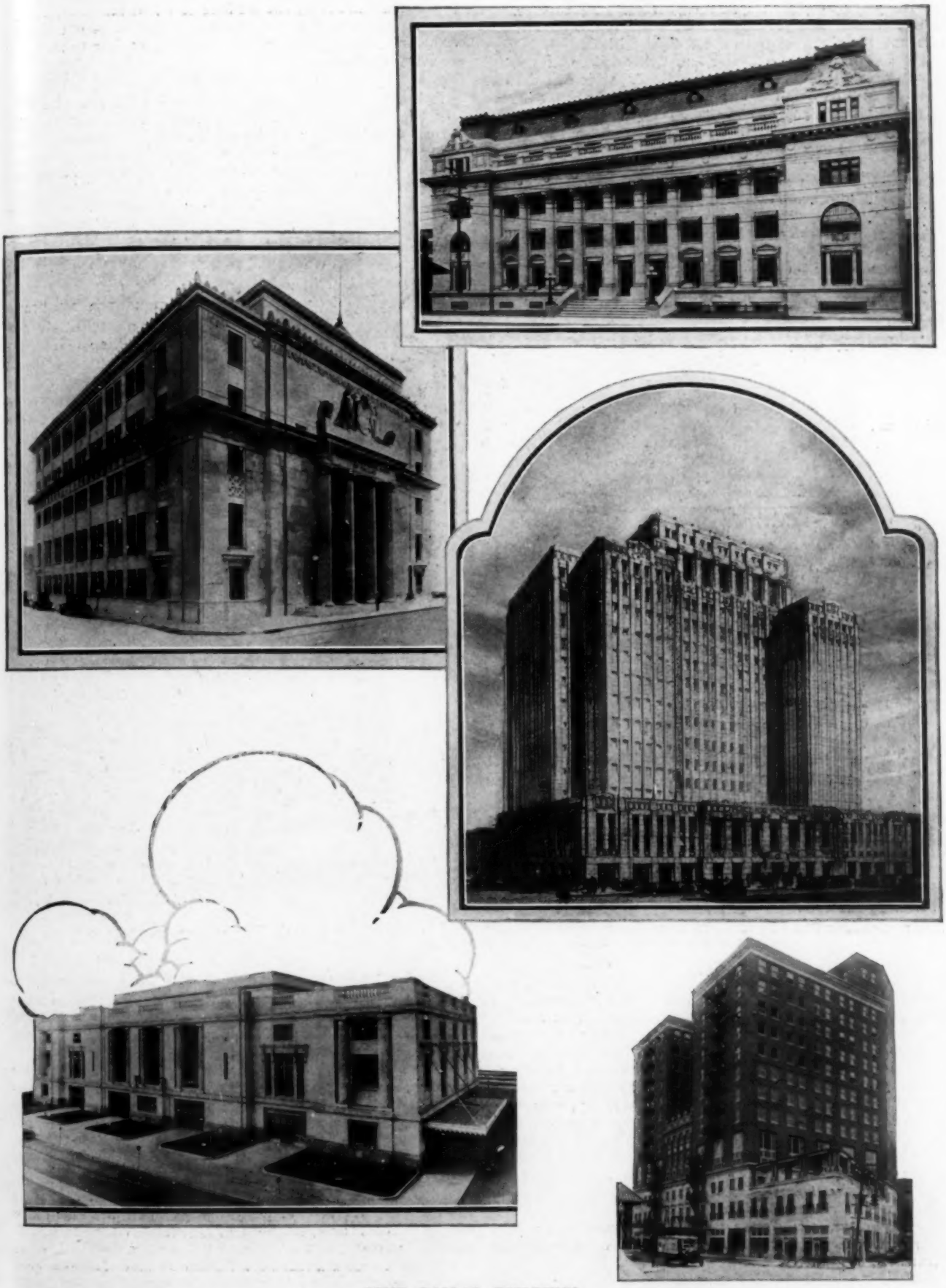


THE BAKER

THE SOUTHLAND

THE PARK

SOME DALLAS HOTELS



SOME DALLAS BUILDINGS

Upper left: FEDERAL RESERVE BANK OF DALLAS. Upper right: MUNICIPAL BUILDING. Center: COTTON EXCHANGE. Lower left: UNION TERMINAL. Lower right: DALLAS ATHLETIC CLUB

A GOLF BUG'S PARADISE

Five years ago, Dallas had only three golf courses. It now boasts a total of sixteen, with 216 holes. There are five country clubs, each with an eighteen hole golf course. Two of these clubs, the Dallas and Lakewood country clubs, were originally in the country, but the expansion of the city has caught up with them and they can now be better termed city golf clubs. The city has not yet reached Cedar Crest, Brookhollow and Glen Haven. Large sums have been expended to perfect these courses, and they daily give surcease to the worries of an increasingly large number of business men. All the courses of Dallas will be open to those who attend the annual session.

There are six splendid municipal golf courses, four for men, one for women and one for boys. There are also six privately owned courses and one university golf links. All are needed to keep pace with the ever-growing demand for this sport and assure the golfer a fine afternoon's workout.

APARTMENT HOTELS OF THE CONVENTION CITY

Above—MAPLE TERRACE. Lower left—STANLEIGH COURT. Lower right—MELROSE COURT.

PLENTY OF ROOMS

With 130 hotels, representing an investment of thirty million dollars, it is doubtful whether any American city of similar size, save resort centers, equals Dallas in hotel facilities. Comfortable rooms await reservation at these hostelries, which are famous for metropolitan service and Southern hospitality. The hotel facilities have been doubled during the last three years, this being made necessary by the growth of the city and its increasing popularity as a tourist and convention center. Dallas hotels have a total guest capacity of nearly 20,000. The city has easily assimilated larger crowds, an example being days during the state fair when the attendance exceeded 200,000. Dallas' eight largest down-town hotels alone have a total of 3,005 rooms. In addition to the skyscraper down-town hostelries, several apartment hotels have recently been completed, which handle a certain amount of transient business.

GOOD EATS

Dallas is well supplied with restaurants, both in connection with hotels and independent of them. They are numerous and of a generally high standard, and some of the highest priced chefs in the nation are here to tempt the epicure. One can get meals with a Western flavor, dishes of old Mexico or older China, or that Southern cooking so dear to the heart of every southerner.

WOMEN LIKE DALLAS

It has been asserted that no city twice the size of Dallas can offer such a complete and attractive retail market. The Orient and the Occident have been combed to supply these shops with goods that catch the eye of women. There is one block in Dallas that sells more shoes at retail than any block of similar length in the United States. There are some half dozen metropolitan department stores in this city which are marvelous examples of modern merchandising.

MILLIONS FOR HOSPITALS

With a total of six and a half million dollars invested in hospital property by the four major institutions of the city, and a total bed capacity of 1,200, Dallas now stands at the head of the Southwest as a medical center. These hospitals last year handled a total of 29,000 exclusive of clinic patients amounting to hundreds of thousands. Many persons coming to Dallas from other cities for medical treatment do not remain in the hospital but prefer to take treatment and spend their time in the local hotels and apartment houses.

While the major hospitals have a large investment in their property, the minor hospitals of a public character also represent an extensive investment of Dallas money, and money from sources interested in the development of hospital facilities here. The city-county hospital system alone, exclusive of Parkland Hospital, is valued at $1,500,000, and in addition to these Dallas has the Masonic Hospital for Children, the Freeman Memorial Clinic, and a number of other institutions having valuable property and equipment. There are 455 physicians and surgeons, 213 registered nurses, 103 practical nurses, 133 dentists and 241 pharmacists in Dallas.

The Dallas County Medical Society is one of the largest county societies in the United States, numbering 360 members. This group is a united body and there exists a harmony of action unusual in so large a group of physicians.

One result of this unity was the erection of the Medical Arts Building, one of the tallest monolithic concrete structures in the world. This building is nineteen stories high and was completed in 1924 at a cost of $1,500,000. It is of Gothic cross design, assuring both light and ventilation to every office. About 60,000 patients visit this building every month.

BAYLOR HOSPITAL AND UNIVERSITY

The largest single institution of healing that Dallas has is the Baylor Hospital, which has property valued at $3,000,000. It has 450 beds, and, in addition to cases in the clinic, cared for 15,000 persons last year who occupied beds. Originally the Baptist Memorial Sanitarium, opened in 1909, it was enlarged in 1922 and the name was changed to Baylor Hospital. One hundred graduate nurses and 165 pupil nurses are employed. The hospital is operated by the Baptist denomination of Texas.

While the main plant of the Baylor University is located at Waco, the Schools of Dentistry, Nursing, Medicine and Pharmacy are in Dallas. The enrolment is in the neighborhood of 1,000.

ST. PAUL SANITARIUM

St. Paul Sanitarium, which has 300 beds, is valued at $1,500,000 and last year treated more than 8,000 persons who occupied beds at the institution. This property includes the major portion of a block, and on the property is located also a large building used as a nurses' training school. The west wing of the structure was the original building; the east wing is of recent construction, including the most modern features of hospital construction, being fireproof throughout. This institution is unusually well adapted to the handling of incoming and outgoing cases. Thousands of clinical cases are handled at this institution annually, and many thousand dollars' worth of charity work is given to sufferers who come to that hospital. Spacious lawns encircle the large building and many shade trees grow about the place, affording the most perfect conditions for convalescent patients during the summer.

DALLAS SANITARIUM

The first 125 bed unit of the Dallas Sanitarium is now nearing completion and will cost $500,000. When the hospital is finally finished it will contain 500 beds, representing an investment of more than $1,250,000. It was established and will be operated by the North Texas Methodist Conference.

PARKLAND HOSPITAL

The Parkland Hospital, of 250 beds, is operated by the City-County Hospital Board. It was established in 1896. Ten graduate nurses and seventy-two nurses in training are employed. It is estimated that the capital investment is in the neighborhood of a million dollars. A nurses' training school is operated in conjunction with the hospital. Plans are being made to enlarge the capacity of the training school to 100.

WOODLAWN SANATORIUM

The Woodlawn Sanatorium also is operated by the City-County Hospital Board. It is located on the Record Crossing road and is devoted exclusively to the treatment of tuberculosis. Eight nurses are employed to take care of the patients; the capacity of the hospital is 100 beds. The City-County Hospital Board also operates the Union Hospital and several other minor institutions.

FREEMAN MEMORIAL CLINIC

The Freeman Memorial Clinic was first established in the basement of the First Presbyterian Church, in 1921. In 1924, the clinic was endowed by T. R. Freeman, and a beautiful building erected as a memorial to his wife and son. The clinic is free and handles an ever growing number of patients. The building, together with the equipment, is valued at $100,000, and is owned and operated by the Southern Presbyterian churches of Dallas.

DALLAS BABY CAMP

The Dallas Baby Camp was established in 1913 by the Dallas Graduate Nurses Association. It contains thirty-five beds and five electric incubators. The camp, with an investment of $25,000, derives its support mainly from the community chest. Treatment is given infants under 2 years of age.

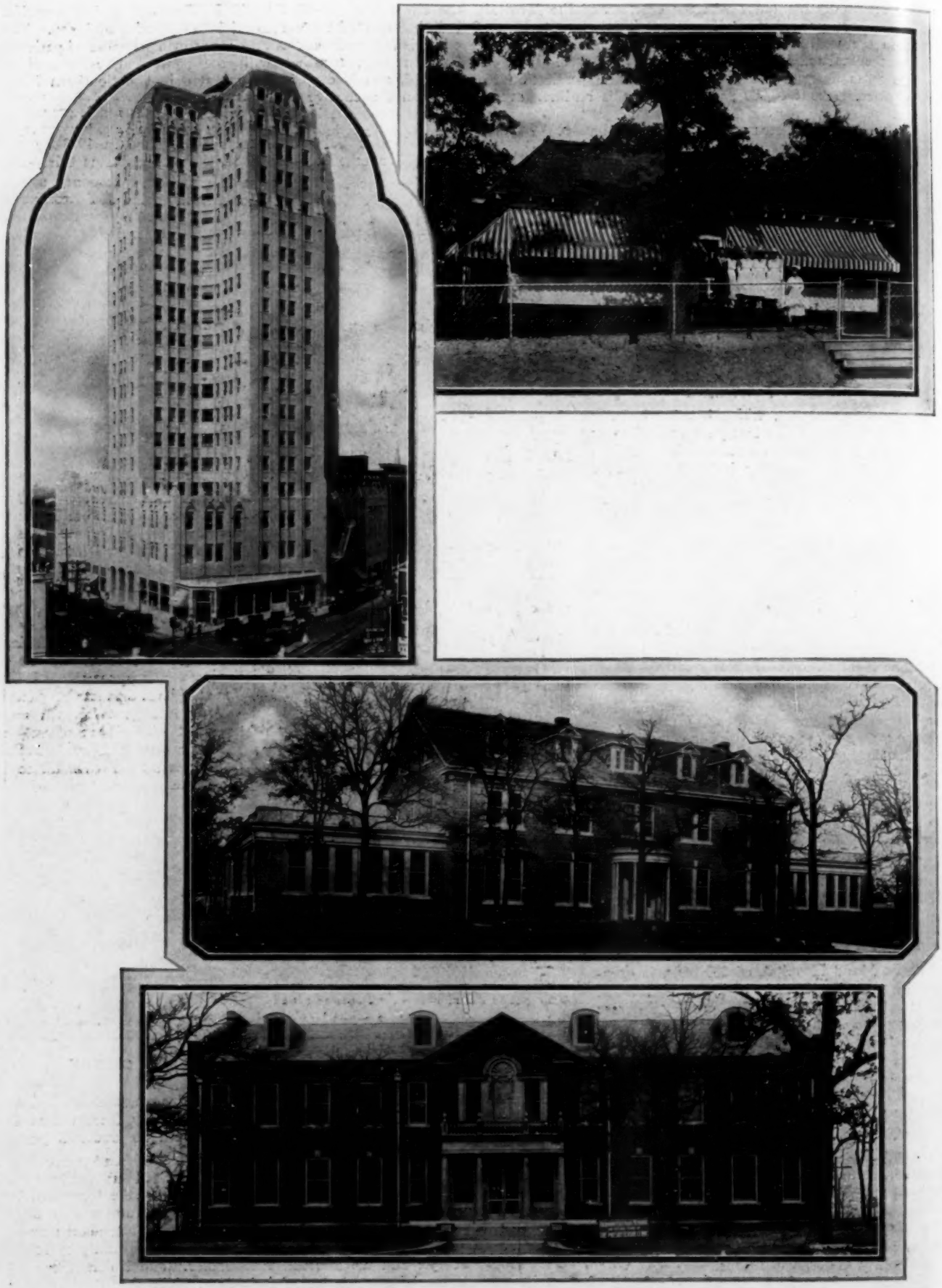
THE MAGNOLIA BUILDING AND THE DALLAS CANYON

MASONIC HOSPITAL

Established in 1923 by Hella Temple for the treatment of crippled children, the Masonic Hospital contains fifty beds and employs five registered nurses, fourteen attendant nurses, and twelve other employees. It is supported jointly by Hella Temple and the Scottish Rite bodies.

HOPE COTTAGE

Hope Cottage is an institution for foundlings. Originally established in 1918, it was moved to a modern and well



SOME DALLAS BUILDINGS OF INTEREST

Upper left: MEDICAL ARTS BUILDING. Upper right: DALLAS BABY CAMP. Center: HOPE COTTAGE. Lower: PRESBYTERIAN CLINIC.

SOME HOSPITALS AND SANITARIUMS

Above: PARKLAND HOSPITAL. Center, left, above: SAINT PAUL'S SANITARIUM. Center, right: WOODLAWN SANITARIUM. Center, left, below: BAYLOR HOSPITAL. Below: MASONIC CHILDREN'S HOSPITAL.

equipped building in 1924. It has 100 beds and employs twelve nurses.

Parkland Hospital, Hope Cottage, the Masonic Hospital and the Dallas Baby Camp are all located in what is rapidly becoming a medical section of the city. The Freeman Memorial Clinic and a privately owned reconstruction and orthopedic hospital are also located in this district. The grounds that surround the buildings are beautiful and are becoming one of the points of interest most frequently visited by sightseers in Dallas.

There are many smaller public and private sanatoriums and clinics. The Timberlawn Sanitarium is a forty bed hospital, employing eighteen nurses and treating nervous and mental diseases. The many fine clinics operated on the group system are helping to make Dallas a most complete medical center.

SPLENDID SCHOOLS

Dallas is the home of the Baylor College of Medicine, Pharmacy, Dentistry and Nursing. This college was originally organized as the medical department of the University of Dallas in 1900. In 1903 it was placed under the Baylor University of Waco. This college enjoys a class A rating from the Council on Medical Education and Hospitals of the American Medical Association, and its graduates now occupy many important places in the practice of medicine in Texas and elsewhere.

Southern Methodist University also is located at Dallas. The campus of this school, which has an enrolment of 3,000, is one of the show places of Dallas. The University of Dallas, a Catholic school for men and boys, has an impressive building in Oak Lawn.

The public school system of Dallas is recognized as one of the finest in the country. There are forty-five elementary and six high schools. The health of the pupils is receiving a great deal of attention from the board of education, and physical examinations are a prerequisite for entrance.

WELCOME TO DALLAS

Physicians of the American Medical Association will find good rooms for rest, golf and other amusements for enjoyment, and a true and hearty welcome to Dallas, "where men are looking forward."

TRANSPORTATION

Railroad Rates to Dallas

The passenger associations throughout the United States have authorized a rate of one and one-half fares for the benefit of members of the American Medical Association and dependent members of their families who will attend the annual session at Dallas. The Canadian Passenger Association has also authorized these reduced rates from points in Canada east of and including Armstrong, Fort William and Sault Ste. Marie. *In order to secure the reduced rates, it will be necessary for each member to secure a certificate from the ticket agent when he purchases his ticket to Dallas.* The certificate must be certified by the Secretary of the American Medical Association. This may be done at the Registration Bureau, located at Fair Park, in Dallas. The certificate must then be validated by a representative of the railroads who will be on duty near the Registration Bureau. When the certificate is so certified and validated, it will entitle its holder to purchase a return ticket to his home, over the same route traveled to Dallas, at one-half fare.

THE SCIENTIFIC EXHIBIT

This picture shows the exhibit at Atlantic City. The Dallas exhibit will be the most comprehensive in the history of the Association. See the program on page 780.

The certificate referred to is not a receipt for money paid for a ticket. *Be sure to ask your railroad ticket agent for a CERTIFICATE when you purchase your ticket to Dallas.*

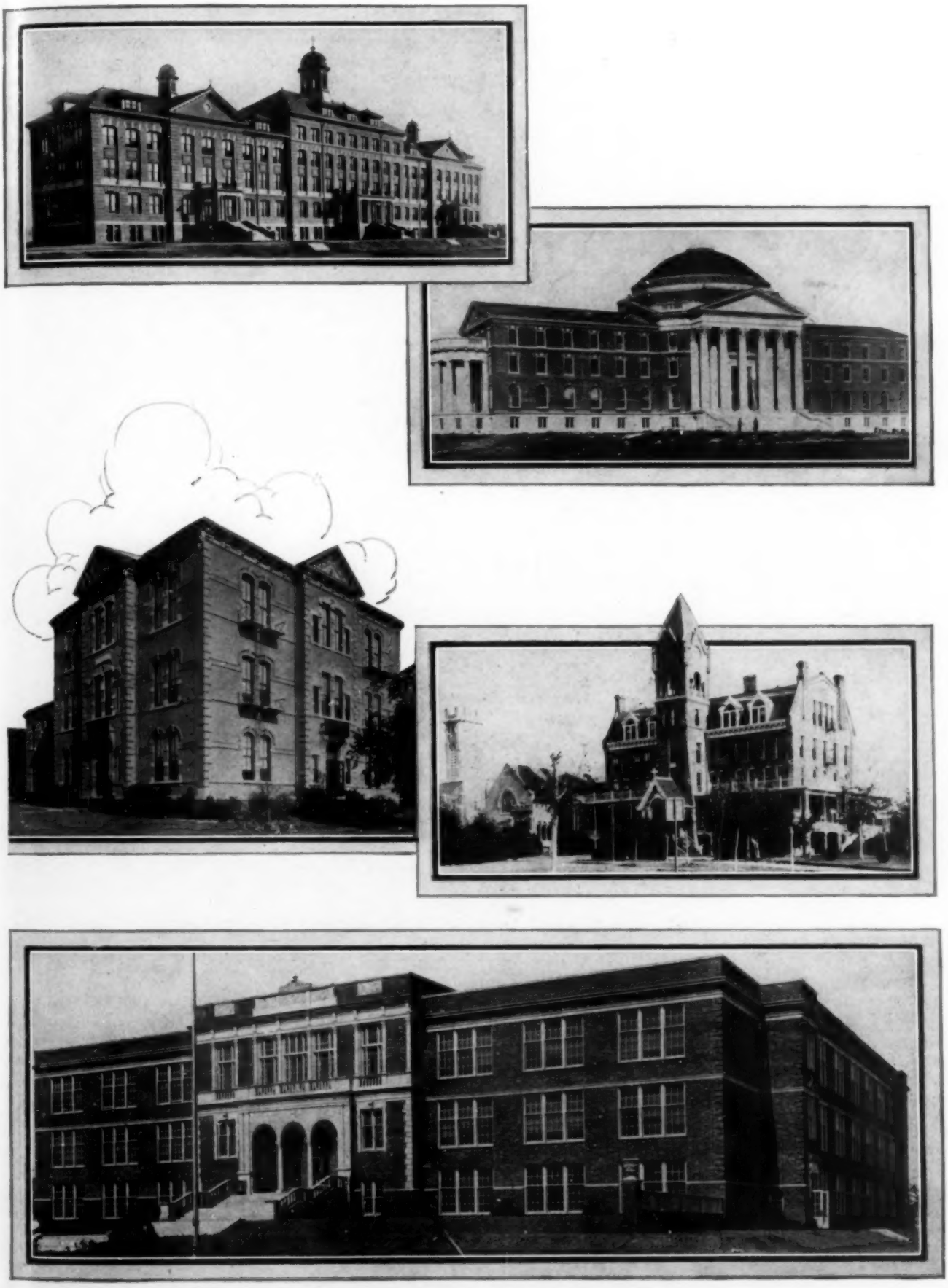
The dates of sale of tickets to Dallas will be April 15 to 21, inclusive, in the territories of the Southwestern Passenger Association, the New England Passenger Association, the Trunk Line Association, the Central Passenger Association, the Southeastern Passenger Association and the Canadian Passenger Association. In the Transcontinental and Western Passenger Associations' territory the dates of sale of tickets from Minnesota, Michigan, Montana, North Dakota, South Dakota, Utah and Wisconsin will be April 14 to 20; from Arizona, British Columbia, California, Idaho, Nevada, Oregon and Washington, April 13 to 19, and from Colorado, Illinois, Iowa, Kansas, Missouri, Nebraska, New Mexico and Wyoming, April 15-21. Certificates *properly certified and validated* will be honored for purchasing tickets for the return journey at one-half fare up to and including April 27, *but these certificates will not be honored after that date.* No refund of fare will be made on account of failure to obtain proper certificate when ticket to Dallas is purchased, nor on account of failure to present validated certificate when purchasing return ticket. The return ticket must be used over the same route as that traveled going to Dallas. Return tickets issued at the reduced rate will not be good on any limited train on which such reduced fare transportation is not honored.

Special Trains from Kansas City and St. Louis

Arrangements are being made for special trains to carry physicians to the Dallas Session from St. Louis and from Kansas City. One train will leave Kansas City at 10:10 p. m., arriving in Dallas at 12 o'clock noon the next day; another train will leave St. Louis at 6:45 p. m., arriving in Dallas at 12:45 p. m. next day. These trains are being arranged by the M. K. T. lines. A rate of fare and one-half for the round trip on the certificate plan will apply from all points. In addition to these trains, the M. K. T. lines operate trains daily, leaving St. Louis at 9:06 a. m. and 6:50 p. m., and leaving Kansas City at 4:30 p. m. and 10:10 p. m.

Special Train from Chicago

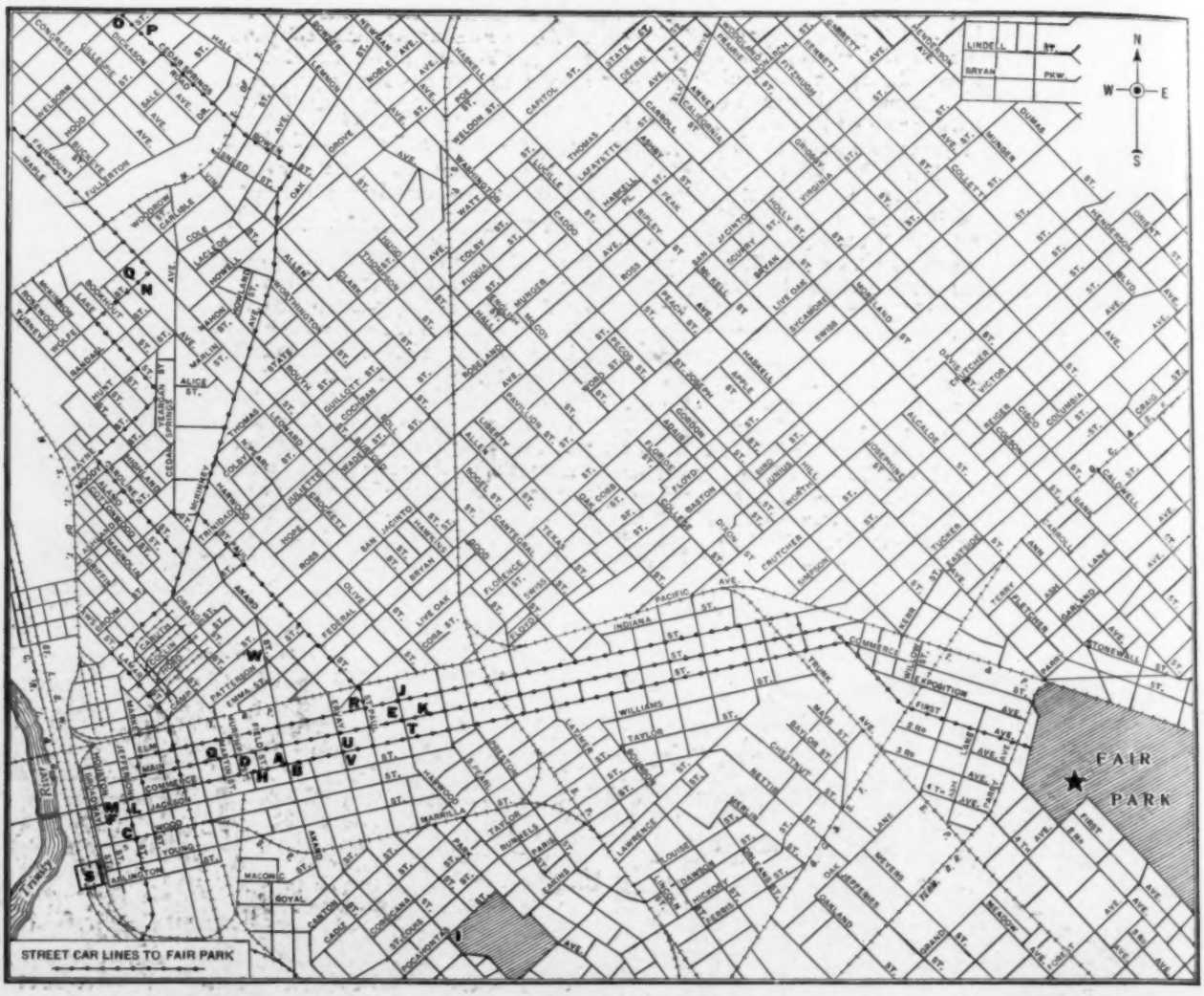
The Chicago Medical Society will again conduct an official train to the Annual Session over the Illinois Central System, Missouri Pacific Lines, and the Texas and Pacific Railway. A golf special will leave Chicago, 11:45 a. m., Friday, April 16, arriving in Dallas, 7 a. m., Monday, April 19, stopping over two days at Hot Springs, Ark., with opportunity for golf and other amusements. On the return trip there will be opportunity for a two-day visit in New Orleans. The fare, Chicago to Dallas, is $34.36, to which should be added the cost of Pullman accommodations. Information concerning this trip with folder may be had by addressing the local agent, or by writing directly to the offices of the Chicago Medical Society.



SOME DALLAS EDUCATIONAL INSTITUTIONS

Upper left: DALLAS UNIVERSITY. Upper right: SOUTHERN METHODIST UNIVERSITY. Center, left: BAYLOR UNIVERSITY. Center, right: ST. MARY'S COLLEGE. Lower: NORTH DALLAS HIGH SCHOOL

MAP OF DALLAS



HOTELS

A—ADOLPHUS
B—BAKER
C—JEFFERSON
D—SOUTHLAND
E—HILTON
F—SCOTT
G—ST. GEORGE
H—WALDORF
I—PARK
J—CAMPBELL HOUSE
K—MILAM
L—CLIFF
M—TEXAN

APARTMENT AND FAMILY HOTELS

N—STONELEIGH COURT APARTMENTS
O—MELROSE COURT APARTMENTS
P—OAK LAWN INN
Q—MAPLE TERRACE APARTMENTS

MISCELLANEOUS

R—DALLAS ATHLETIC CLUB
S—UNION TERMINAL
T—MUNICIPAL BUILDING
U—POST OFFICE
V—INTERURBAN STATION
W—FIRST BAPTIST CHURCH

***Section Meeting Places; Registration Bureau; Scientific Exhibit; Technical Exhibit; Motion Picture Theater; Post Office; Information Bureau.**

REGISTRATION

The Bureau of Registration will be located in the Automobile-Manufacturers' Building at Fair Park. Members of the Committee on Registration of the Local Committee on Arrangements will be on hand to assist those who desire to register.

A branch postoffice in charge of government postoffice officials will be opened for the convenience of visitors, and an information bureau will be operated in connection with the Bureau of Registration.

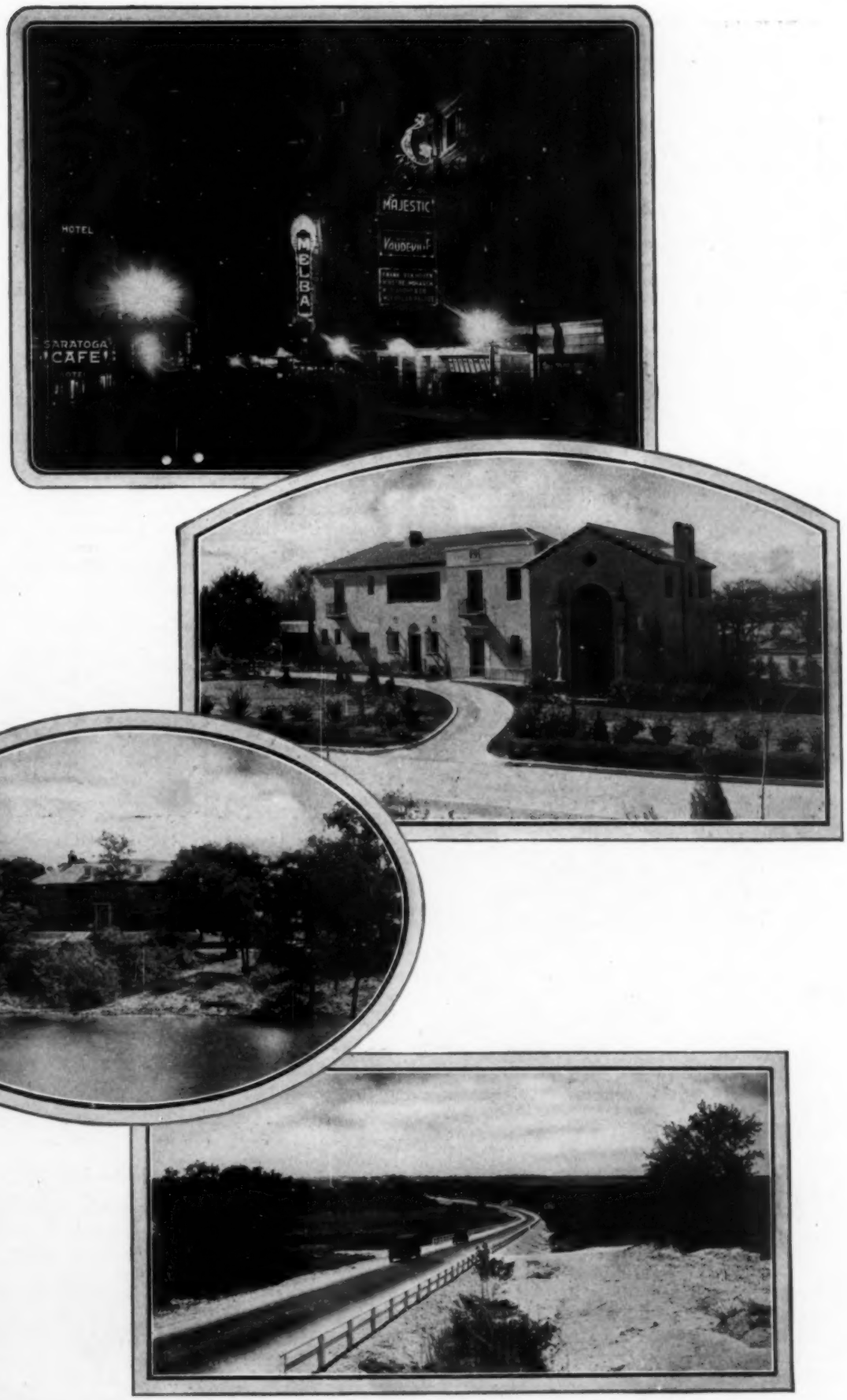
Who May Register

Only Fellows, Affiliate, Associate and Honorary Fellows and Invited Guests may register and take part in the work of the sections. Fellows of the Scientific Assembly are those who have, on the prescribed form, applied for Fellowship, subscribed to THE JOURNAL, and paid their Fellowship dues for the current year. The annual Fellowship dues provide a subscription to THE JOURNAL for one year. Fellowship cards are sent to all Fellows after payment of annual dues, and these cards should be presented at the registration window. Any who have not received cards for 1926 should secure them at once by writing to the American Medical Association, 535 North Dearborn Street, Chicago.

Members in Good Standing Eligible to Fellowship

Members in good standing in county medical societies are members of state associations and of the American Medical Association. All members in good standing are eligible for Fellowship in the Scientific Assembly, and may qualify as Fellows after reaching Dallas; but it will be far better to qualify before leaving home in order that pocket cards may be secured and brought to Dallas so that registration can be more easily and more promptly effected. Application forms may be had on request.

Subscribers to THE JOURNAL who have not received pocket cards for 1926 should write to the American Medical Association for application blanks and information as to further requirements.



THEATER ROW AND ROADS TO DALLAS

Register Early

Fellows living in Dallas and in Texas, as well as all other Fellows who are in Dallas on Monday and Tuesday, should register as early as possible. The names of those who register on the first day will appear in the *Daily Bulletin* the next day, and this will enable visiting physicians to find friends if they have registered.

Suggestions That Will Facilitate Registration

Fellows should fill out completely the spaces on both sections of the front of the *white* registration card, which will be found on the tables in front of the Registration Bureau.

Physicians who desire to qualify as Fellows should fill out completely the spaces on both sections of the front of the *blue* registration card, and sign the application on the back. These blue cards also will be found on the tables.

Entries on the registration cards should be written plainly, or printed, as the cards are given to the printer to use as "copy" for the *Daily Bulletin*.

1. Fellows who have their pocket cards with them can be registered with little or no delay. They should present the filled out *white* registration card, together with their pocket cards, at one of the windows marked "Registration by Pocket Card." There the clerk will compare the two cards, stamp the pocket card and return it, and supply the Fellow with a copy of the official program and other printed matter of interest to those attending the annual session.

2. Those Fellows who have forgotten their pocket cards should present the filled in *white* registration card at the window marked "Paid—No Card." The work of registration at this window will be conducted as rapidly as possible; but the necessity of finding the Fellow's name on the Fellowship roster may occupy a considerable time and will occasion inconvenience to those who neglect to bring their pocket cards with them.

3. The Fellow whose 1926 dues are unpaid should present his filled in *white* registration card with the amount of his Fellowship dues ($5) at one of the windows marked "Cash." Here, too, there will be some delay; but the work of registering will be conducted as promptly as possible.

4. As previously stated, it will assist in registering if those who desire to qualify as Fellows will file their applications and qualify as Fellows by writing directly to the American Medical Association, 535 North Dearborn Street, Chicago, so that their Fellowship may be entered not later than April 1. Any applications received later than April 1 will be given prompt attention, but the Fellowship pocket card may not reach the applicant in time so that he can use it in registering at the Dallas Session.

As already stated, it will be possible for members of the organization to qualify as Fellows at Dallas. In order to do this, applicants for Fellowship will be required to fill out both sections of the front of the *blue* registration card and sign the formal application printed on the reverse side. It is suggested that those who apply for Fellowship at Dallas shall provide themselves, before leaving home, with certificates signed by the secretary of their state association, attesting that they are members in good standing in the state and county branches of the organization. A state membership card for 1926 will be acceptable. The certificate or membership card should be presented along with the filled in *blue* registration card at the window in the registration booth marked "Applicants for Fellowship."

FIRST BAPTIST CHURCH
Place of the Opening General Meeting

MEETING PLACES AND GENERAL HEADQUARTERS

HOUSE OF DELEGATES: Roof Garden, Baker Hotel, Commerce and Akard.

OPENING GENERAL MEETING: First Baptist Church, 606 North Ervay Street.

PRACTICE OF MEDICINE: Auditorium, Fair Park.

SURGERY, GENERAL AND ABDOMINAL: Automobile-Manufacturers' Building, Fair Park.

OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY: Automobile-Manufacturers' Building, Fair Park.

OPHTHALMOLOGY: Fine Arts Building, Fair Park.

LARYNGOLOGY, OTOLOGY AND RHINOLOGY: Fine Arts Building, Fair Park.

DISEASES OF CHILDREN: Auditorium, Fair Park.

PHARMACOLOGY AND THERAPEUTICS: Automobile-Manufacturers' Building, Fair Park.

PATHOLOGY AND PHYSIOLOGY: Automobile-Manufacturers' Building, Fair Park.

NERVOUS AND MENTAL DISEASES: Automobile-Manufacturers' Building, Fair Park.

DERMATOLOGY AND SYPHILOLOGY: Automobile-Manufacturers' Building, Fair Park.

PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH: Automobile-Manufacturers' Building, Fair Park.

UROLOGY: Automobile-Manufacturers' Building, Fair Park.

ORTHOPEDIC SURGERY: Automobile-Manufacturers' Building, Fair Park.

GASTRO-ENTEROLOGY AND PROCTOLOGY: Automobile-Manufacturers' Building, Fair Park.

RADIOLOGY: Automobile-Manufacturers' Building, Fair Park.

MOVING PICTURE THEATER: Automobile-Manufacturers' Building, Fair Park.

DIAGNOSTIC CLINICS: Fair Park.

GENERAL HEADQUARTERS OF SCIENTIFIC EXHIBIT, REGISTRATION BUREAU, TECHNICAL EXHIBIT, INFORMATION BUREAU, ASSOCIATION BRANCH POST OFFICE: Automobile-Manufacturers' Building, Fair Park.

IN OLD MEXICO

Upper left: XOCHIMILCO. Upper right: SACRA MONTE—AMECA MECA. Center: AMECA MECA. Lower left: CATHEDRAL—MEXICO CITY. Lower right: POPOCATAPETL IN ERUPTION. From AMECA MECA

ENTERTAINMENT

The local committee for the Dallas Session has planned an elaborate series of entertainments which promise a full program to every one attending the session.

On Sunday evening, April 18, plans have been made for motor tours through the city. At 5:15 a concert by the Dallas Symphony Orchestra will take place at the Dallas Fair Park Auditorium. Following this concert, arrangements have been made for various private entertainments.

On Monday, April 19, the House of Delegates convenes. The exhibits will be open. During the entire day golf tournaments will be held at the various club houses, which will be open to visitors.

On Tuesday afternoon a garden party is to be tendered to the Woman's Auxiliary and their friends at Maple Terrace. Tuesday night, April 20, the opening meeting is to be held at the First Baptist Church, Ervay and San Jacinto streets. At this meeting, the President, Dr. Wendell C. Phillips, will deliver his presidential address.

Wednesday, April 21, following the scientific sessions in the morning, a barbecue will be held at Fair Park from 12 to 2 p. m. The barbecue is tendered by Dr. John H. Dean, with carving under the supervision of Mr. Max Hahn, for forty years expert "barbecuer" of Dallas.

Last June, Dr. Dean selected eighty cows with calves about 6 weeks old out of a herd of 4,000. These cows were selected according to size, vigor and milk producing qualities, so as to insure a rapid, healthy growth for each calf. The eighty cows and calves were turned into a six-section pasture which had not been used, and which contained an abundance of fresh food and water, assuring the cattle of a properly selected, scientific diet. It is customary to wean calves from the mother after six months, but this plan was not followed with the calves to be used for the barbecue, in order that they might secure their mother's milk, so as to provide the best nourishment for rapid, healthful growth. A full diet was begun for the cattle in December. The calves will be killed in advance of the session and the meat prepared so as to be in the best condition for the barbecue. Mr. Tony Bazar, with a corps of able assistants, has been delegated to arrange for the service during the barbecue.

On Wednesday night, from 6:30 to 9 o'clock, various fraternities and alumni will be given opportunity to hold special sessions. Arrangements have been made for a musicale and reception for the ladies under the auspices of the Woman's Auxiliary and of the Dallas County Medical Society. Arrangements have also been made by the Dallas County Medical Society to provide special entertainers at the various hotels which represent section headquarters.

On Thursday, April 22, following the programs of the sections, a Mexican dinner will be served at Fair Park by the Dallas County Medical Society. Plans have been made for Mexican entertainment, and the service will be tendered by Mexican waitresses. On Thursday night, April 22, the President's reception and ball will be held, using the ballrooms of the Adolphus and Baker hotels. Orchestras will be provided for continuous music in both places.

DALLAS HOTELS

Following is a list of the hotels of Dallas. In writing for hotel reservations, state whether a single or double room is desired, whether a room with or without a bath is wanted, and, if possible, the time of expected arrival.

Leading Hotels at Dallas

Name and Address	No. of Rooms	Single		Double	
		Without Bath	With Bath	Without Bath	With Bath
Adolphus Hotel Commerce and Akard	825	$1.50 -3.50	$2.50 -6.00	$3.00 -6.00	$5.00 -8.00
Baker Hotel Commerce and Akard	700	.....	$2.00 -5.00	.....	$4.50 -7.00
Jefferson Hotel Wood and Jefferson	450	$1.50 -2.50	$2.50 -4.00	$3.00 -4.00	$4.00 -8.00
Southland Hotel Main and Murphy	250	$1.50 -2.00	$2.50 -3.00	$3.00 -4.00	$4.00 -5.00
Hilton Hotel Main and Harwood	320	$1.50 -1.75	$2.00 -3.00	$2.75 up	$3.00 -5.00
Scott Hotel Houston and Jackson	160	.....	$2.00 -2.50	.....	$3.00 -3.50
St. George Hotel 1012 Main	150	$1.00	$2.00	$2.00	$4.00
Waldorf Hotel 1302 Commerce	150	$1.00 -1.50	$2.00 -2.50	$2.50	$4.00 .....
Park Hotel 1312 S. Ervay	175	$1.00 -1.50	$2.00 -2.50	$2.00 up	$2.50 -3.50
Campbell House Elm and Harwood	108	$1.25 -1.50	$2.00	$2.50	$3.50 -4.00
Milam Hotel 2013 Main	60	$1.50	$1.75 -2.50	$2.50	$2.75 -3.00
Cliff Hotel 201 E. Jefferson	147	$1.00 -1.50	$2.00	$1.50	$3.00
Texan Hotel 212 S. Houston	54	$1.50	$2.00	$2.00	$2.50
Apartment and Family Hotels					
Stoneleigh Court Apts. 2927 Maple Avenue	405	.....	$4.00	.....	$6.00
Melrose Court Apts. 3015 Oak Lawn Avenue	450	.....	$3.50	.....	$5.00
Oak Lawn Inn 3702 Cedar Springs	52	$1.00	.....	$2.50	.....
Maple Terrace Apts. 3009 Maple Avenue	400	.....	$3.00	.....	$5.00

GOLFING TOURNAMENT

The twelfth tournament of the American Medical Golfing Association is set for Monday, April 19, all day play being planned, to be followed by a golf dinner in the evening. Dr. L. C. Ellis, Medical Arts Building, Dallas, is chairman of the local golf committee and ex officio secretary of the Golfing Association.

Any male member of the American Medical Association is privileged to join this association. Applications for enrolment and entries to play should be sent to the business secretary, Mr. John Lorenzo Walter, 1507 Hinman Avenue, Evanston, Ill.

Full details of the golf program will be mailed in due season to all Fellows who are then on the mailing list of the Golfing Association.

Railway golfing specials, with arrangements for play en route, are being planned.

WOMAN'S AUXILIARY

The Woman's Auxiliary of the American Medical Association has planned an elaborate program for the Dallas Session.

Tuesday

10 a. m., meeting of Executive Board, English Room, Adolphus Hotel.

4 to 6 p. m., garden party, Maple Terrace, Mrs. John Oliver McReynolds, honoring; Mrs. Seale Harris, president; Mrs. F. P. Gengenbach, president-elect, and visiting ladies.

8 p. m., installation of President of the American Medical Association.

Wednesday

10 a. m., annual session of Woman's Auxiliary of the American Medical Association, Palm Garden, Adolphus Hotel.

12:30 p. m., barbecue, Fair Park.

8 p. m., musicale, roof garden, Baker Hotel, Woman's Auxiliary to Dallas County Medical Association, honoring the Woman's Auxiliary of the American Medical Association, and visiting ladies.

Thursday

12:30 p. m., luncheon, Fair Park.

9 p. m., President's reception.

SIDE-TRIPS IN TEXAS

The traveler to the Dallas Session will have an unusual opportunity to visit other communities of the West and Southwest that are making special efforts to provide features of interest to the physician. In fact, the physician who goes to Dallas may count on having all of Texas as his host and, indeed, Mexico as well.

EL PASO

Difficult though it is to appreciate, the rice marshes and orange groves of South Texas are a part of the same state in which one may climb into the Rockies and drink the dry air and perpetual sunshine of El Paso.

Texas runs out an arm so far into the great Southwest that she actually has El Paso planted west of the central meridian of New Mexico and farther south than the southernmost end of California. El Paso is the geographic center of the great arid section, extending from Colorado deep into old Mexico, and from the plains of Texas west to the California line. This "Center of the Health Country" rests aloft in a mountain range, 4,000 feet above the sea.

On the side trip to El Paso there will be more to greet one than sparkling air and a sunlight of Alpine intensity. Progress and industry and international commerce pass here, using El Paso as the gateway into Mexico. Romance passed this way when, in the sixteenth century, the Spanish conquest came and left behind the Franciscan padres and their quaint old missions, which still stand. Again, the pioneers of America passed this way when the stage coach came with the "forty-niner," the six-gun man, the miner and the cattleman. All left their mark, which can be seen today in the architecture, the institutions and the customs of El Paso.

One may go abroad from El Paso for six cents. And ere leaving the international bridge, one realizes that one is in a foreign land, interesting in its pleasures, its habits and its institutions.

El Paso welcomes you to Texas!

FORT WORTH

Developments in West Texas, rivaling those in California and Florida, have given Fort Worth an impetus that promises to send her far forward; for Fort Worth is the market place for the live stock, cotton, grain and petroleum produced so bountifully in West Texas. Fort Worth men own millions of acres of West Texas land and hundreds of thousands of cattle. The railroads of West Texas head up at Fort Worth, with advantageous rates, making Fort Worth indeed "the capital of West Texas."

During the last five years the number of farms in Fort Worth's preferential rate territory has increased by 21,367, exceeding by more than 4,000 the increase for all of California and more than quadrupling the gain made by Florida.

In the last five years West Texas has gained 500,000 in population, and raw land at the rate of more than 1,000,000 acres a year has gone under the plow. The influx of new settlers is increasing and seven consecutive years without a crop failure have been recorded. The recent estimate of population made by the Bureau of the Census credited Fort Worth with a gain of more than 45 per cent since 1920.

Fifteen subdivisions are being sold. New homes are being completed at the rate of 300 a month. The Fort Worth Club building of fourteen stories, a ten story addition to the First National Bank Building and an eight story building for a wholesale dry goods store are being completed. Large new buildings for two of the city's department stores and one of the leading furniture stores of the South have been occupied in the last three months.

Fort Worth's industries are employing more men and turning out a greater volume of products than ever before in the history of the city. A cement plant, a cotton mill and an addition to one of the refineries completed during the year, each cost more than $1,000,000. Several smaller plants were built.

GALVESTON

In 1818 Jean LaFitte, a French adventurer, established his famous commune on Galveston Island, using this as a base for carrying on his warfare with Spain. The LaFitte commune passed in time, and its place was taken by a thriving little seafaring community which played an important part in the early history of Texas. The city was named for Count Bernardo De Galvez in 1838, and in 1839 was incorporated into a city.

The things that caused the strategist LaFitte to select Galveston as a base for his expeditions are the primary causes for the success of the port and are largely responsible for its reputation as a resort. These were the items of location and climate, with all their attendant advantages. Galveston has one of the finest harbors in the country, capable of receiving hundreds of the largest ships and handling annually a volume of business aggregating nearly a billion dollars. The total value of foreign business, exports and imports, shows Galveston as ranking second only to New York. It is served by four trunk line railroads, which, with their connections, reach every section of the southwestern territory.

Galveston leads the ports of the nation in the exportation of cotton. An average of more than three million bales, almost half of the total exports of the country, find their way through this port to the markets of the world every year. It is also the principal sulphur exporting port and handles enormous quantities of oil, lumber, spelter, cottonseed products and many other commodities. The imports consist principally of raw sugar, crude oil, sisal, coffee and various novelties from the Orient.

The development of the port of Galveston has cost the United States government a little less than $20,000,000, but this amount is more than saved to the people of the Southwest every two years.

Galveston's reputation as a premier winter and summer resort is widespread and secure, and her future growth in that direction is unquestioned and assured. This is due largely to her matchless climate and to the incentives and natural facilities for outdoor recreations in subtropical environments, which have a lure that few can resist.

The fame of Galveston as the "playground of the Southwest" is brought about by its equable climate, its natural location, surf bathing, boating, fishing, hunting, tropical foliage and fine hotels.

HOUSTON

Houston is often referred to as a city that fooled the geographers. Situated inland 50 miles from the Gulf of Mexico yet today it is an important world port dealing intensively in ocean shipping.

The first permanent settlement on the banks of Buffalo Bayou, where the city of Houston now stands, was made in 1836 immediately after the battle of San Jacinto, the deciding conflict in the struggle of the republic of Texas from Mexican domination. It was fought, April 21, 1836, and that date is annually observed throughout all Texas as one of the year's most significant holidays. The battlefield, which is now a state park, is situated 22 miles from Houston and is reached over a hard-surfaced highway or by boat on the Houston ship channel.

The city of Houston was named for General Sam Houston, the leader of the Texas forces when Texas achieved her independence. Further honors were conferred on the pioneer village when, Dec. 15, 1836, the first congress of the republic of Texas designated Houston the new nation's first capital. The capitol building, a rough frame structure, stood on the site of the Rice Hotel, the center of the city's present retail business section.

In November, 1914, Houston exported her first bale of cotton, and the total exportation of that commodity for the 1919-1920 cotton season was 69,839 bales. In the short space of five years since that time Houston has reached the rank of second cotton port of America. At the close of the 1924-1925 season, more than 1,800,000 bales of the fleecy staple were shipped abroad from the port of Houston.

The cultural side of Houston has not been neglected. From its humble beginning in 1836, Houston has grown into a modern city of skyscrapers, paved streets, boulevards, parks, fine schools and beautiful churches. In Rice Institute, Houston has one of the prominent universities of the South. The

original endowment of William Marsh Rice has grown to $14,000,000. The equipment of Rice Institute is of the finest and its faculty has been recruited from the educational centers of the world.

Houston has recently constructed an art museum, a magnificent public library, an outdoor memorial theater, a remodeled municipal auditorium, and a number of projects in the interest of outdoor recreation.

Houston has 2,500 acres of land in its park system, not including a number of small ward beauty spots for public enjoyment and a few playgrounds not incorporated in the parks. One of the most interesting zoological gardens in the South is housed in Hermann Park.

SAN ANTONIO

San Antonio lies 700 feet above sea level and has a climate that is balmy and free from too much humidity. The city has fifty-two parks and plazas and numerous golf courses for the entertainment of the visitor. Like many another Southern city, its Latin atmosphere lends unusual charm. Here one finds Alamo, the monument to the liberty of Texas. South of the city are five famous missions with marvelous stained windows and beautiful carvings. One hour from San Antonio, Medina Lake, 16 miles long and 2 miles wide, famous for its fighting black bass, attract fishermen from all over the country. Near San Antonio also is a hunting ground, replete with quail, jack rabbit, squirrel and other small game.

Of particular interest at San Antonio is Fort Sam Houston, a center for army activities and particularly the army flying schools and aviation fields. The hotels are modern, and ample accommodations are constantly available for visitors.

IN OLD MEXICO

Special efforts are being made to arrange a tour into Mexico, especially for physicians who will attend the Dallas Session. Two special trains will leave Dallas on the closing day of the Annual Session going to Houston and Galveston, into the Rio Grande valley and crossing the border into Mexico at Brownsville. The first stop in Mexico will be at Matamoras. It is planned to stop at fifteen historical and important points, including one week in Mexico City. On the return trip, the special trains will go to San Antonio, arriving there, May 9.

In Mexico City, a reception will be tendered to the visitors by President Calles. Arrangements may be made at Dallas for extending the time limit on transportation until May 12 so that physicians can avail themselves of this trip.

THE SCIENTIFIC EXHIBIT

The Scientific Exhibit will be located in the Manufacturers' Building, adjacent to the Technical Exhibit and the Motion Picture Theater. In case of all exhibits, personal demonstrations will be given. Among the exhibits will be the following:

SPECIAL EXHIBITS

At the request of the Committee on Scientific Exhibit of the Board of Trustees, there will be three special exhibits. (These exhibits will not be open to awards.)

IMMUNOLOGY EXHIBIT: This exhibit will be under the active charge of Dr. H. R. Wahl, head of the Department of Pathology, University of Kansas; Dr. Ludvig Hektoen, director of the John McCormick Institute of Infectious Diseases, will act in behalf of the Advisory Committee. Cooperating with Dr. Wahl are Dr. Esmond R. Long, associate professor of pathology, University of Chicago; Dr. R. W. Lawson, Department of Bacteriology, Baylor University, and Dr. J. H. Black, Dallas. The exhibit will illustrate practical applications of immunology. There will be booths devoted to the demonstration of the application of toxins, antitoxins, agglutinins, precipitins, hemolysins, phagocytosis, vaccines, especially tuberculins, smallpox, rabies and typhoid vaccines, and allergins. Various individuals and organizations are cooperating in behalf of the Advisory Committee. The United States Public Health Service will demonstrate a coordinating exhibit on technic of vaccination and preparation and proper use of the vaccine.

MORBID ANATOMY EXHIBIT: Fresh pathologic material will be demonstrated daily. It is proposed to secure suitable material from various hospitals in larger cities of Texas, augmented by material from Dallas. The committee in charge is composed of Dr. George T. Caldwell, professor of pathology, Baylor Medical College, chairman; Dr. W. H. Moursund, dean of Baylor Medical College, and Dr. Kenneth M. Lynch, Dallas.

EXHIBIT ON FRACTURES: This exhibit will cover a series of Colles' fracture, the hyperextension chauffeurs' fracture of the radial styloid, Pott's fracture, reversed Pott's fracture, and the Cotton fracture, the fracture of both bones just above the joint. This exhibit is in charge of a committee composed of Drs. Frederick J. Cotton, Robert B. Osgood and Charles L. Scudder, Boston.

PATHOLOGIC AND LABORATORY EXHIBITS

JANET CALDWELL and OZRO T. WOODS, Baylor Hospital, Dallas: Bacteriophage. Demonstration of the usual manifestations of the bacteriophage in solid and fluid mediums using chiefly *B. typhosus* and *B. coli*, including titrations by serial dilution.

ALDO CASTELLANI, Department of Tropical Medicine, School of Medicine, Tulane University of Louisiana, New Orleans: Some tropical mycoses and their causative agents. Exhibit will consist of cultures of fungi and also charts. It is proposed as part of Dr. Castellani's exhibit to demonstrate the technic of isolation and of staining various mycologic specimens. The international reputation of Dr. Castellani and his experience as a teacher in the London School of Tropical Medicine indicate opportunity to visitors to the session for postgraduate study in a field rarely covered in American schools.

HENRY A. COTTON, Trenton, N. J.: Relation of chronic sepsis and toxemia to mental diseases. Exhibit of specimens illustrating lesions in the teeth, tonsils and gastro-intestinal tract, with drawings of the various lesions with especial reference to the gastro-intestinal tract. Statistics and data showing results of treatment.

RUSSELL L. HADEN, University of Kansas School of Medicine, Kansas City, Kan.: Bacteriologic study of periapical dental infection. Exhibit of charts showing results of bacteriologic study of periapical dental infection: dental roentgenograms, with original culture tubes for comparison of roentgenographic and bacteriologic findings; photographs showing lesions in rabbits following the injection of bacteria from dental foci; museum specimens illustrating typical lesions in animals produced by bacteria from chronic foci of infection; charts showing the results of studies in elective localization.

F. W. HARTMAN, ADOLPH BOLLIGER and H. P. DOUB, Detroit: Experimental nephritis produced by roentgen radiation. Exhibit of gross specimens, photographs, photomicrographs and charts showing functional and vascular changes.

HEART STUDY GROUP: GEORGE BLUMER, New Haven; ALEXANDER LAMBERT (chairman), New York; EMANUEL LIBMAN, New York, and S. CALVIN SMITH, Philadelphia: Modern methods of heart study. Two years ago this subject was handled by Drs. Blumer, Lambert and Smith, who, as a special committee, undertook the exhibit at the request of the Board of Trustees. Last year this group carried on, as individuals, in order to develop certain additional phases, and this year will continue the study. The exhibit will consist of presentation of cardiac infections as shown by rheumatic involvement of the valves and aorta; the syphilitic involvement of the aorta and the valves; and acute and subacute endocarditis, including the possibilities and healing processes in these infections; also the nerve supply of the heart and angina pectoris will be presented. The electrocardiograph will be continued with some advanced work illustrating the

changes that may be expected in the electrocardiogram of heart muscle involvement.

GLENVILLE GIDDINGS, Atlanta, Ga.: Cultural study: Pulmonary streptothricosis. Exhibit showing organism growing on various mediums. Photomicrographs showing colonies of various ages; detection of organisms in sputum with different stains; showing organisms recovered from experimental animals with different stains.

B. S. KLINE, A. B. WILLARD and A. M. YOUNG, Cleveland: Microscopic slide precipitation test for syphilis. Exhibit showing comparative results with Wassermann and Kahn tests, with demonstrations.

W. W. LOONEY, Department of Anatomy, Baylor University, Dallas: Regional dissections in gross anatomy. Exhibit of special dissections of various regions of the body, colored to contrast the different anatomic structures.

KENNETH M. LYNCH, Dallas Medical and Surgical Clinic, Dallas: Protozoa of the Alimentary Tract of Man. 1. Amebas of man in the rat. 2. Differential diagnosis. 3. Prevalence, relation to age, sex, pathologic state, etc., of the flagellates. 4. Culture work. Exhibit will include microscopic demonstration and differentiation of protozoa of the alimentary tract, also showing cultures of some, and some of the amebas of man as obtained from the rat.

W. F. MANGES, Philadelphia: Foreign body cases. Photographs of foreign bodies removed from air and food passages; roentgenograms of foreign bodies.

MAYO CLINIC AND MAYO FOUNDATION GROUP, Rochester, Minn.: (1) E. H. HARGIS (in collaboration with Surgical Staff of Mayo Clinic): Carcinoma of the stomach. Exhibit of specimens of carcinoma of the stomach which were removed at operation or obtained at necropsy, illustrating many of the various types of lesions of this condition. (2) P. P. VINSON and J. H. MOERSCH: Foreign bodies removed from air and food passages. Exhibit of a collection of foreign bodies removed from the air and food passages, photographs and history abstracts, together with several models devised for the purpose of stimulating the necessary precaution to prevent foreign body ingestion by children. (3) A. H. MCINDOE and V. S. COUNSELLER: Injection and corrosion specimens of the vascular radicles of the liver and biliary tract. Exhibit of reproduction of the vascular radicles and biliary tract of the normal liver and of the liver in several pathologic conditions. The specimens were obtained by means of injection and corrosion technic. The more important points to be illustrated are (*a*) the great vascularity of the normal liver; (*b*) the reduced vascularity in cirrhosis; (*c*) the dilatation of the biliary tract following obstruction of the common bile ducts.

ERNEST SACHS, Washington University School of Medicine, St. Louis: Neurologic lesions. Exhibit of drawings illustrating various types of neurologic lesions; specimens of various types of brain and spinal cord tumors, with explanations.

UNITED STATES BUREAU OF ENTOMOLOGY, Dallas: Some insects and related forms which attack man or carry disease. Exhibit will consist principally of bromide enlargements showing certain forms of animal life which attack man and illustrating the lesions produced. These will include the developments of the malarial parasites within the bodies of mosquitoes, certain flies which cause myiasis, some ticks which carry diseases, and creeping eruption of the Southern states. Models of fly traps and other devices for controlling some of the insects will be included.

F. B. YOUNG and A. L. COOPER, Scottsbluff, Neb.: Fossil and prehistoric pathologic conditions; paleopathology. Exhibit of pathologic fossil conditions, prehistoric remains, photographs and prints, mounted on cardboard and arranged to show both normal and pathologic conditions. A series of roentgen-ray films of those conditions suitable for such study. A study of the persistence of certain types of pathologic conditions of the bones from early geological times to the present, with the specimens in series.

ARTHUR M. YUDKIN, New Haven, Conn.: Ocular disorders attributable to dietary deficiencies. Exhibit of: (*a*) paintings illustrating disorders observed; (*b*) enlarged photomicrographs showing characteristic histologic changes in the eye and adnexa; (*c*) demonstration (with the use of microscopes) of the histopathology of the ocular disorders; (*d*) exhibits illustrating types of diet involved.

MEDICAL, SURGICAL AND RADIOLOGIC EXHIBITS

W. W. DUKE, Kansas City, Mo.: Allergy. Exhibit of photographs; mounted specimens of plants; specimens of plants; specimens of pollen, gross and microscopic; colored lantern slides and lumière plates, with demonstrations.

WALTER J. WILSON, Detroit: Mitral stenosis and vagal pressure. Exhibit of electrocardiograms showing mitral stenosis: (*a*) auricular flutter, (*b*) auricular fibrillation, (*c*) paroxysmal tachycardia, (*d*) split p waves; vagal pressure: (*a*) heart block, (*b*) cardiac standstill, (*c*) changes in p waves.

VILRAY P. BLAIR, St. Louis: Corrections of single harelip—primary and secondary operations. Exhibit of photographs, casts and colored models showing various types of original condition, method of correcting these and illustrating the corrected cases; also exhibit showing various types of poor results from operation and the method of correction.

EDWARD A. CAYO, San Antonio, Texas: Orthopedic appliances and instruments. Exhibit of eight unusual appliances and instruments.

A. C. SCOTT, Temple, Texas: (1) Rapid intestinal anastomosis by a rapid suture clamp. (2) Electric cautery in treatment of cancer. Exhibit of various "historic" cauteries.

JULIEN E. BENJAMIN and SAMUEL BROWN, Jewish Hospital, Cincinnati: Roentgen-ray and electrocardiographic studies. Exhibit of roentgenograms of unusual cardiac conditions and diseases of aorta showing value of lateral views; electrocardiographic studies of same cases.

JOSEPH C. BLOODGOOD, Baltimore: Benign and malignant lesions of the oral cavity. Exhibit of mounted photographic plates.

FELIX BAUM, National Jewish Hospital, Denver: Radiology. Exhibit of roentgenograms dealing with (*a*) focal tuberculin reaction, (*b*) pneumoradiography of the tuberculous kidney, (*c*) apical tuberculosis.

AMÉDÉE GRANGER, New Orleans: New position for making roentgenograms of the mastoids. Exhibit illustrating method of making roentgenograms of the mastoids in Law, Arcelin, and new positions.

PRESTON M. HICKEY, University Hospital, Ann Arbor, Mich.: Roentgen-ray studies of injected pathologic material. Exhibit will consist of roentgenograms of pathologic material, principally amputations, involving tumors, tuberculosis, etc., and demonstrates, by means of roentgenograms of the barium sulphate filled blood vessels, disturbances of the circulation.

SAMUEL IGLAUER, GEORGE BENZING, SAMUEL BROWN and H. KENNON DUNHAM, Cincinnati General Hospital, Cincinnati, and WARREN C. BREIDENBACH, Dayton, Ohio: Injected iodized oils in the roentgen-ray diagnosis of tracheal and bronchopulmonary conditions. Exhibit of roentgen-ray films of the chest showing various lesions of the bronchi and lungs which can be demonstrated by injected iodized oils in the trachea; demonstration of two methods of introducing the oils.

THOMAS O. MENESS and L. E. HOLLY, Grand Rapids, Mich.: Roentgen-ray diagnosis of anencephaly. Exhibit of prints of roentgen-ray films showing anencephalic monsters before delivery, including both cranioschisis and craniorachischisis.

H. LESLIE MOORE, Dallas, Texas: Enlarged thymus. Exhibit of roentgen-ray films.

SHERWOOD MOORE, Barnes Hospital, St. Louis: Cholecystography. Exhibit of mounted prints of cholecystograms, photographs and drawings relating to cholecystography.

NELSE F. OCKERBLAD, Kansas City, Mo.: Stricture of the ureter in males. Exhibit of transparency reductions from roentgen-ray plates.

CLINTON K. SMITH, Kansas City, Mo.: Postmortem ureteropyelographic study of infants and children. Exhibit of films with photographs of unusual pathologic specimens.

CHARLES E. STEWART, Battle Creek, Mich.: Roentgenograms of chest demonstrating iodized oil used in diagnosis and treatment. Exhibit of films and also microscopes for demonstrating cultures and blood specimens.

EXHIBIT ON CANCER BY SECTION ON DERMATOLOGY AND SYPHILOLOGY

The exhibit under the auspices of the Section on Dermatology and Syphilology will consist of numerous photographs illustrating not only the varying clinical appearances of cancer, particularly as applied to the skin, but other conditions that simulate cancer as applied to the skin, and must be diagnosed differentially. The various features will be grouped on the basis of making the exhibit educational and instructive to the general medical public. There will be numerous histologic sections, generally amplified by personal demonstration and employing the projecting microscope. In another section of the exhibit, the results of cancer research will be shown. The committee in charge is composed of Drs. I. L. McGlasson, Fred Weidman and E. D. Crutchfield.

M. F. ENGMAN and W. H. MOOK, St. Louis: Cancer of skin, diagnosis and treatment. Exhibit showing differential diagnosis with reference to tubercular syphilis.

CHARLES W. FENNERUD, Chicago: Microscopic slides illustrating histopathology of cancer.

HERBERT FOX, Philadelphia Zoological Gardens, Philadelphia: Cancer in wild animals. Exhibit of cancer in both mammals and birds; also photographs and photomicrographs.

LEWIS HURLEY, New York: Experimentally produced cancer in mice.

EVERETT S. LAIN and MARION M. ROLAND, Oklahoma City: Cancer on the lip. Exhibit illustrating degrees of development and location. Classifications with regard to prognosis; illustrations of various technics used in treating with radium and roentgen rays.

GEORGE MILLER MCKEE and FRED WISE, New York: Diagnosis and treatment of malignancies of the skin. Exhibit illustrating cancer problem, diagnosis and treatment, with pathologic exhibit.

I. L. MCGLASSON and C. F. LEHMAN, San Antonio: Diagnosis and prognosis of malanotic malignancies. Exhibit of melanotic sarcomas and nevoid growths that are potentially cancerous.

HOWARD MORROW, San Francisco: Diagnosis and treatment of cancer. Exhibit showing differential diagnosis with pathology and treatment.

WILLIAM ALLEN PUSEY, Chicago: Exhibit of photographs of cancer cases.

BEDFORD SHELMIRE, Dallas: Skin malignancies. Exhibit of photographs of various types of skin cancers.

FRANCES CARTER WOOD, New York: Exhibit of stock of inoculated rat tumors; also lumière plates dealing with cancer.

EDUCATIONAL EXHIBITS

AMERICAN ASSOCIATION OF HOSPITAL SOCIAL WORKERS, Chicago: Exhibit of posters and charts showing what the Hospital Social Workers' organization is, type of work done by medical and psychiatric social workers in hospitals and clinics, and what is accomplished for the patients.

AMERICAN ASSOCIATION FOR MEDICAL PROGRESS, New York: Experimental science and medical progress. Exhibit of charts and publications showing the work of the American Association for Medical Progress.

AMERICAN FEDERATION OF ORGANIZATIONS FOR THE HARD OF HEARING, New York: Exhibit showing the work of the American Federation of Organizations for the Hard of Hearing. Charts, posters and literature bearing on the social work for the deafened in reference to (*a*) otologists, (*b*) general physician and the general public, (*c*) deafened people, and (*d*) social workers and educators.

AMERICAN HEART ASSOCIATION, New York: Exhibit of charts, descriptive of the preventive problems, value of organized care, educational facilities and development dealing with heart disease as a public health problem.

AMERICAN SOCIAL HYGIENE ASSOCIATION, New York: Researches in the diagnosis and treatment of syphilis and gonococcal infection. Exhibit of pathologic specimens, both macroscopic and microscopic, bacterial cultures and slides, photographs, photomicrographs, statistical tables, new drugs, etc., illustrating important researches made at Johns Hopkins, University of Michigan, Harvard, Washington University, Rockefeller Institute and other colleges, concerning new methods of diagnosis and treatment of syphilis and gonorrhea.

AMERICAN SOCIETY FOR THE CONTROL OF CANCER, New York: Right and wrong in cancer. Exhibit of panels and charts dealing with a public health phase of cancer.

PAN S. CODELLAS, San Francisco: Oath of Hippocrates in original Greek. Exhibit of Littre version of the oath of Hippocrates, written in Greek script of the fourth to sixth century B. C. style.

CONFERENCE OF FOREIGN MISSION BOARDS OF NORTH AMERICA, New York: Medical missions. Exhibit of pictures, slides, posters, specimens, and books, descriptive of the work of medical missions in various countries.

MEDICAL SOCIETY OF THE STATE OF NEW YORK, New York: Work of the Committee on Public Health and Medical Education. Exhibits of maps and charts illustrating activities of the committee.

NATIONAL BOARD OF MEDICAL EXAMINERS, Philadelphia: Exhibit of charts and other material describing the work of the National Board of Medical Examiners.

PLAYGROUND AND RECREATION ASSOCIATION OF AMERICA, Chicago: Community recreation. Exhibit of photographs, charts, posters and printed matter.

UNITED STATES BUREAU OF MINES, DEPARTMENT OF COMMERCE, Washington and Pittsburgh: Exhibit will contain collection of harmful dusts and illustrate methods of and various appliances used in collecting dusts; also laboratory procedure, with actual apparatus for analyses, roentgen-ray plates and photographs showing the effect of harmful dusts.

UNITED STATES CHILDREN'S BUREAU, DEPARTMENT OF LABOR, Washington, D. C.: Child hygiene. Exhibit of charts showing results of investigation of rickets among infants in New Haven, Conn., and Washington, D. C. Charts showing posture standards for use in classification and comparison of children of school age, with reference to posture; also charts showing causal factors and trends in infant and maternal mortality rates.

UNITED STATES PHARMACOPEIAL CONVENTION (BOARD OF TRUSTEES), Washington, D. C.: Drugs and preparations of the Pharmacopeia of the United States of America, Tenth Revision. Exhibit will consist of selected vegetable and animal drugs and also chemicals which are now official in the new edition of the United States Pharmacopeia.

AMERICAN MEDICAL ASSOCIATION

COUNCIL ON PHARMACY AND CHEMISTRY: Posters and specimens illustrating the efforts of the Council in the interests of scientific medicine and rational prescribing.

AMERICAN MEDICAL ASSOCIATION CHEMICAL LABORATORY: Posters and specimens bearing on such subjects as newer synthetics, comparative prices of proprietary and nonproprietary remedies and drug control.

BUREAU OF INVESTIGATION: Exhibit of: (1) a series of educational posters; (2) specimens of pamphlets published for the purpose of furnishing information easily and quickly to the public, and (3) the volumes of "Nostrums and Quackery."

COUNCIL ON MEDICAL EDUCATION AND HOSPITALS: (1) Reliable information about medical education, licensure, reciprocity, hospitals, postgraduate courses and accredited internships. (2) Display of spot maps locating the hospitals in each county and town in the United States. (3) Pamphlet publications and statistical data on medical education and hospitals.

BUREAU OF HEALTH AND PUBLIC INSTRUCTION: Exhibit of (1) charts and posters on health education series, of infant welfare series and some of the prize posters of the *Hygeia* contest; (2) charts and pamphlets showing cooperative work of National Education Association and the bureau; (3) "Manual of Suggestions for the Conduct of Periodic Health Examinations" and the blanks prepared by the bureau for conduct of the examinations, to which particular attention will be called.

AMERICAN MEDICAL ASSOCIATION LIBRARY: Graphic demonstration by charts and posters of the various services rendered by the library to the individual physician and to the

field of current medical literature. Exhibit of material illustrating the reference and bibliographic service, package library service, periodical lending service, indexing, etc.

BUREAU OF LEGAL MEDICINE and LEGISLATION: Exhibit of posters showing the general scope of activities of the bureau; specimen inquiries answered by the bureau; and the result of efforts to secure a lower tax for physicians under the Harrison Narcotic Act; maps outlining the extent and results of the medical defense activities of the constituent associations in 1924, and a map showing the states that have enacted laws regulating the sale of lye and other caustic substances in packages suitable for household use.

MOTION PICTURE THEATER

The Motion Picture Theater will be located in the Manufacturers' Building immediately adjacent to the Scientific Exhibit. The Theater will open at noon on Monday and run continuously each day thereafter from 9 a. m. to 5:30 p. m., and until 4:30 on Friday. Each speaker will demonstrate the talk with either lantern slides or motion pictures.

FRANK BILLINGS, Chicago: Available, Simple and Feasible Methods of Approximate Functional Diagnosis in Chronic Nephritis. Illustrated with lantern slides.

GEORGE E. BROWN, Rochester, Minn.: The Vascular Disturbances of the Extremities. Illustrated with lantern slides.

JOHN R. CAULK, St. Louis: Progress in Kidney Surgery. Illustrated with lantern slides.

ARTHUR J. CRAMP, Director, Bureau of Investigation, THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION: (1) Aural Quackery and Pseudomedicine. (2) Medical Patents. Illustrated with lantern slides.

HENRY A. CHRISTIAN, Boston: Digitalis in Heart Disease Showing a Regular Pulse. Illustrated with lantern slides.

CARL HENRY DAVIS, Milwaukee: Normal Labor and Eclampsia. Illustrated with motion pictures.

W. W. DUKE, Kansas City, Mo.: A Story of Pollen Disease. Illustrated with lantern slides.

J. J. DURRETT, Memphis, Tenn.: Tuberculosis. Illustrated with lantern slides.

E. C. ELLETT, Memphis, Tenn.: The Pathologic Anatomy of Glaucoma. Illustrated with lantern slides.

J. EARL ELSE, Portland, Ore.: (1) A Usable Classification of Goiter. (2) Classification of Goiter Based on the Pathology with Congenital Findings. Illustrated with lantern slides.

CLARK W. FINNERUD, Chicago: Small-Spore Ringworm Infections (Microsporosis). Illustrated with motion pictures.

HARVEY FLETCHER, New York: Recent Research Work on Speech Audition. Illustrated with motion pictures.

A. I. FOLSOM, Dallas: Urologic Examination in Children. Illustrated with lantern slides.

J. P. GREENHILL, Chicago: Advantages and Technic of the Cervical Cesarean Section. Illustrated with lantern slides.

CLIFFORD G. GRULEE, Chicago: Infant Feeding. Illustrated with lantern slides.

P. S. HENCH, Rochester: The Mercury Combining Power of Blood and the Salivary Urea Index, Two New Simple Renal Function Tests. Illustrated with motion pictures.

FRANK HINMAN, San Francisco: Diagnostic Characteristics of Urogenital Diseases. Illustrated with lantern slides.

CHEVALIER JACKSON, Philadelphia: Poisoning of Children by Household Lye: Bronchoscopy in the Treatment of Suppurative Diseases of the Lung. Illustrated with motion pictures and lantern slides.

ARMIN KLEIN, UNITED STATES CHILDREN'S BUREAU, Washington, D. C.: Posture. Illustrated with motion pictures.

HERMAN L. KRETSCHMER, Chicago: Diagnostic Problems in Urology. Illustrated with lantern slides.

GEORGE M. MCKEE, New York: Pathologic Diagnosis and Treatment of Cancer of the Skin. Illustrated with lantern slides.

JAMES S. MCLESTER, Birmingham, Ala.: High Blood Pressure. Illustrated with lantern slides.

W. H. MOOK, St. Louis, Mo.: Differential Diagnosis of Cancer and So-called Precancerous Lesions. Illustrated with lantern slides.

JOHN OSBORN POLAK, Brooklyn: How the Pathology Determines the Election of Radium or Operation in Fibroid Tumors. Illustrated with lantern slides.

STEWART R. ROBERTS, Atlanta, Ga.: Diagnostic Problems of the Heart and Lungs. Illustrated with lantern slides.

FRANK SMITHIES, Chicago: Circulatory Anomalies Leading to the Production of Peptic Ulcers. Illustrated with lantern slides.

P. P. VINSON and H. J. MOERSCH, Rochester, Minn.: Demonstration of Swallowing in Cardiospasm, the Method of Treatment and the Results Obtained. Illustrated with motion pictures.

ORRIN S. WIGHTMAN, New York: Aneurysm of the Aorta with Demonstration of Gross and Microscopic Specimens. Illustrated with motion pictures.

FRANCIS C. WOOD, New York: Diagnosis of Cancer. Illustrated with lantern slides.

HUGH H. YOUNG, Baltimore: Recent Advances in Antiseptics: Chemical Attack Against Local Infections. Illustrated with lantern slides.

AMERICAN SOCIAL HYGIENE ASSOCIATION, New York: (1) The Health Twins at Work; (2) Animated Blue Print and the General Arrangement for an Efficient Economical Clinic for the Treatment of Venereal Diseases. Motion picture films.

AMERICAN SOCIETY FOR THE CONTROL OF CANCER, New York: The Relation Between Practice and Theory in Cancer. Illustrated with motion pictures.

METROPOLITAN LIFE INSURANCE COMPANY, New York: (1) Working for Dear Life. (2) No More Diphtheria. Motion picture film.

UNITED STATES BUREAU OF MINES, Washington, D. C.: Principles of First Aid. Motion picture film.

UNITED STATES DEPARTMENT OF AGRICULTURE: Motion Picture Film "Pasteur." This film is a gift from the French government to the United States.

UNITED STATES PUBLIC HEALTH SERVICE: "The Science of Life." Motion picture film.

BROADCASTING A TEXAS TOUR

Wednesday evening, March 24, between 8 and 10 o'clock, station WBBM, the Stewart-Warner Station, Chicago, will broadcast a travelogue under the auspices of the Stewart-Warner Touring Bureau. The production will be entitled, "Gulf Coast Tour," and will cover the cities of Dallas, San Antonio, Houston, Galveston, New Orleans, Gulfport and Biloxi. The principal points of interest will be described by W. H. Spears, a travel authority. This travelogue is a part of the Stewart-Warner Touring Bureau service to motorists. Marked maps of the routes by automobile to Dallas from any point, together with descriptive literature, will be mailed free to readers of THE JOURNAL on application to the Touring Bureau, 1826 Diversey Parkway, Chicago.

GOLF SPECIAL

A golf special to the Dallas Session is being conducted this year under the direction of Dr. F. C. Warnshuis, Powers Theater Building, Grand Rapids, Mich. This train will leave Chicago on the Illinois Central Railroad, Sunday, April 11, at 6 p. m. Stops will be made in Nashville, April 12; Biloxi, April 13; New Orleans, April 14; Galveston, April 15; San Antonio, April 16, arriving in Dallas, April 17, at 7:15 a. m. The cost of the trip is $215, which includes round trip from Chicago to Dallas and returning by any direct route through St. Louis or Kansas City. It includes also one-half a compartment for each person on the special train from Chicago to Dallas, all meals *en route* and green fees, caddy fees, automobile charges and tips.

PRELIMINARY PROGRAM OF THE SCIENTIFIC ASSEMBLY

PROGRAM OF THE OPENING MEETING

Tuesday, April 20, 8:30 p. m.

Music.

Call to Order by the President, WILLIAM D. HAGGARD, Nashville, Tenn.

Invocation. REV. GEORGE W. TRUETT.

Announcements. E. H. CARY, Chairman, Local Committee of Arrangements.

Address of Welcome. CHARLES M. ROSSER, President, State Medical Association of Texas.

Address of Welcome. J. O. MCREYNOLDS, President, Dallas County Medical Society.

Music.

Introduction and Installation of President-Elect WENDELL C. PHILLIPS, New York.

Address. WENDELL C. PHILLIPS.

Music.

THE PROGRAMS OF THE SECTIONS

Outline of the Scientific Proceedings—The Preliminary Program and the Official Program

The following papers are announced to be read before the various sections. The order here is not necessarily the order that will be followed in the Official Program, nor is the list complete. The Official Program will be similar to those issued in previous years, and will contain the final program of each section with abstracts of the papers, as well as lists of committees, programs of the General Meeting, lists of entertainments, map of Dallas and other information. To prevent misunderstandings and to protect the interest of advertisers, it is here announced that this Official Program will contain no advertisements. It is copyrighted by the American Medical Association and will not be distributed before the session. A copy will be given to each Fellow on registration.

SECTION ON PRACTICE OF MEDICINE

MEETS IN AUDITORIUM, FAIR PARK

OFFICERS OF SECTION

Chairman—EUGENE S. KILGORE, San Francisco.
Vice Chairman—CHARLES C. BASS, New Orleans.
Secretary—BRYCE W. FONTAINE, Memphis, Tenn.
Executive Committee—JOSEPH A. CAPPS, Chicago; ELLIOTT P. JOSLIN, Boston; EUGENE S. KILGORE, San Francisco.

Wednesday, April 21—2 p. m.

Diagnostic Criteria in Malignant Disease of the Upper Right Quadrant. M. L. GRAVES, Houston, Texas.
Discussion to be opened by HORACE W. SOPER, St. Louis, and JULIUS FRIEDENWALD, Baltimore.

Chronic and Recurring Bronchitis Simulating Pulmonary Tuberculosis. CHARLES N. MEADER, Denver.

Rheumatic Pneumonia (Lantern Demonstration). MEYER A. RABINOWITZ, Brooklyn.

Cancer of the Lungs, with Especial Reference to Increased Incidence Following Recent Influenza Epidemic (Lantern Demonstration).
JOHN A. LICHTY, F. R. WRIGHT and E. A. BAUMGARTNER, Clifton Springs, N. Y.
Discussion on Papers of DRS. MEADER, RABINOWITZ, and LICHTY, WRIGHT and BAUMGARTNER to be opened by PAUL H. RINGER, Asheville, N. C.; L. J. MOORMAN, Oklahoma City; EMANUEL LIBMAN, New York; JOHN M. BLACKFORD, Seattle; FELIX BAUM, Denver, and A. E. GREER, Houston, Texas.

Modern Practical Tests of Renal Function (Lantern Demonstration). P. S. HENCH, Rochester, Minn.
Discussion to be opened by C. W. DOWDEN, West Baden, Ind., and L. P. GAY, St. Louis.

Classification and Treatment of Chronic Arthritis (Lantern Demonstration).
RUSSELL L. CECIL and BENJAMIN H. ARCHER, New York.

The Use of *o*-Iodoxybenzoic Acid in the Treatment of Chronic Arthritis.
A. G. YOUNG and J. B. YOUMANS, Ann Arbor, Mich.
Discussion on Papers of DRS. CECIL and ARCHER, and YOUNG and YOUMANS to be opened by E. E. IRONS, Chicago; LLOYD THOMPSON, Hot Springs, Ark., WILLIAM ENGELBACH, St. Louis, and RALPH PEMBERTON, Philadelphia.

Thursday, April 22—2 p. m.

Chairman's Address: Precordial Pain.
EUGENE S. KILGORE, San Francisco.

Subacute Bacterial Endocarditis.
W. L. BIERRING, Des Moines, Iowa.

Chronic Pericarditis: A Discussion of the Clinical and Experimental Aspects. JOHN H. MUSSER, New Orleans.

The Clinical Recognition of Pulsus Alternans (Lantern Demonstration). ROGER S. MORRIS, Cincinnati.
Discussion on Papers of DRS. KILGORE, BIERRING, MUSSER and MORRIS to be opened by PAUL D. WHITE, Boston; WILLARD J. STONE, Pasadena, Calif.; W. S. THAYER, Baltimore; JOSEPH L. MILLER, Chicago; W. T. SWINK, Memphis, Tenn.; K. H. BEALL, Fort Worth, Texas; JAMES S. MCLESTER, Birmingham, Ala., and RANDOLPH LYONS, New Orleans.

Measurement of Cardiac Overload.
JOHN WALKER MOORE, Louisville, Ky.

Cardiac Asthma. JOSEPH H. PRATT, Boston.

Bedside Study of Air Hunger. CHARLES F. HOOVER, Cleveland.
Discussion on Papers of DRS. MOORE, PRATT and HOOVER to be opened by G. CANBY ROBINSON, Nashville, Tenn.; F. A. WILLIUS, Rochester, Minn.; STEWART R. ROBERTS, Atlanta, Ga.; JOHN PHILLIPS, Cleveland; J. B. GUTHRIE, New Orleans, and M. D. LEVY, Houston, Texas.

Friday, April 23—2 p. m.

Election of Officers

Pancreatic Diseases: Etiology and Clinical Findings, with Report of Cases (Lantern Demonstration).
MOSES BARRON, Minneapolis.

Cholecystography in Diabetes Mellitus (Lantern Demonstration).
M. K. TEDSTROM, Corinth, Miss., and W. H. OLMSTED, St. Louis.

Method of Following Treatment in Diabetes (Lantern Demonstration). ROLLIN T. WOODYATT, Chicago.
Discussion on Papers of DRS. BARRON, TEDSTROM and OLMSTED, and WOODYATT to be opened by T. HOMER COFFEN, Portland, Ore.; SEALE HARRIS, Birmingham, Ala.; A. L. LEVIN and I. I. LEMANN, New Orleans; H. RAWLE GEYELIN, New York, and LEE RICE, San Antonio, Texas.

Circulatory Tonics versus Circulatory Depressants in Cardiovascular-Renal Disease, with Hypertension (Lantern Demonstration).
CLARENCE L. ANDREWS, Atlantic City.

The Use of Liver Extract in the Treatment of High Blood Pressure (Lantern Demonstration).
W. J. MACDONALD, St. Catharines, Ontario, Canada.

Ultimate Results of Essential Hypertension (Lantern Demonstration). J. E. PAULLIN, Atlanta, Ga.
Discussion on Papers of DRS. ANDREWS, MACDONALD and PAULLIN to be opened by R. W. BAIRD, Dallas, Texas; JOHN B. NICHOLS, Washington, D. C.; JOHN R. WILLIAMS, Rochester, N. Y.; RALPH H. MAJOR, Kansas City, Mo.; HENRY A. CHRISTIAN, Boston, and E. GHENT GRAVES, Houston, Texas.

The Etiology and Treatment of Pernicious Anemia.
LEWELLYS F. BARKER, Baltimore.
Discussion to be opened by RUSSELL L. HADEN, Kansas City, Mo.; CHARLES P. EMERSON, Indianapolis, and SAMUEL A. BROWN, New York.

SECTION ON SURGERY, GENERAL AND ABDOMINAL

MEETS IN AUTOMOBILE-MANUFACTURERS' BUILDING, FAIR PARK

OFFICERS OF SECTION

Chairman—DALLAS B. PHEMISTER, Chicago.
Vice Chairman—J. E. SWEET, Philadelphia.
Secretary—J. TATE MASON, Seattle.
Executive Committee—URBAN MAES, New Orleans; EVARTS A. GRAHAM, St. Louis; DALLAS B. PHEMISTER, Chicago.

Wednesday, April 21—9 a. m.

Cauterization and Cautery Excision of Cancer: A Study of One Thousand Cases.
ARTHUR CARROLL SCOTT, JR., Temple, Texas.
Discussion to be opened by JAMES F. PERCY, Los Angeles.

Substernal Goiter (Lantern Demonstration).
FRANK H. LAHEY, Boston.

Recognition of the Toxic Patient Unsuited to Thyroidectomy (Lantern Demonstration).
WILLARD BARTLETT, St. Louis.
Discussion on Papers of DRS. LAHEY and BARTLETT to be opened by A. BENNETT COOKE, Los Angeles, and ARTHUR E. HERTZLER, Halstead, Kan.

Sterilization of Local and General Infections by Intravenous Injection of Mercurochrome-220 Soluble; Experimental and Clinical Evidence (Lantern Demonstration).
HUGH H. YOUNG, Baltimore.
Discussion to be opened by DYER F. TALLEY, Birmingham, Ala., and F. G. DU BOSE, Selma, Ala.

Ligation of the Aorta: A Clinical Experimental Study (Lantern Demonstration).
BARNEY BROOKS, Nashville, Tenn.
Discussion to be opened by RUDOLPH MATAS, New Orleans, and J. SHELTON HORSLEY, Richmond, Va.

The Surgical Treatment of Pulmonary Suppuration (Lantern Demonstration).
STUART W. HARRINGTON, Rochester, Minn.
Discussion to be opened by EVARTS A. GRAHAM, St. Louis.

Surgical Aspects of Cleft Palate (Lantern Demonstration).
JAMES E. THOMPSON, Galveston, Texas.

The Surgical Treatment of Cleft Palate: A New Operation Constructed from Parts of Many Old Operative Procedures (Lantern Demonstration).
GEORGE V. I. BROWN, Milwaukee.
Discussion on Papers of DRS. THOMPSON and BROWN to be opened by VILRAY PAPIN BLAIR, St. Louis, and GORDON B. NEW, Rochester, Minn.

Thursday, April 22—9 a. m.

Election of Officers

Chairman's Address (Lantern Demonstration).
DALLAS B. PHEMISTER, Chicago.

Fractures of the Ankle Joint and of the Lower End of the Tibia and Fibula (Lantern Demonstration).
EDGAR LORRINGTON GILCREEST, San Francisco.
Discussion to be opened by WILLIS COHOON CAMPBELL, Memphis, Tenn., and ISIDORE COHN, New Orleans.

Results of Animal Experimentation with Osteoperiosteal Bone Grafts (Lantern Demonstration).
GEORGE MORRIS DORRANCE, Philadelphia.
Discussion to be opened by WILLIAM THOMAS COUGHLIN, St. Louis.

The Diagnosis and Treatment of Benign and Early Malignant Lesions of Oral Cavity (Lantern Demonstration).
JOSEPH COLT BLOODGOOD, Baltimore.
Discussion to be opened by ALBERT COMPTON BRODERS, Rochester, Minn., and ARTHUR CARROLL SCOTT, SR., Temple, Texas.

Jejunostomy: A Clinical Review and Experimental Findings (Lantern Demonstration).
THOMAS G. ORR and RUSSELL LANDRAM HADEN, Kansas City, Mo.
Discussion to be opened by HUGH NELSON PAGE, Augusta, Ga., and J. SHELTON HORSLEY, Richmond, Va.

Experimentally Produced Chronic Gastric Ulcer and Its Clinical Significance (Lantern Demonstration).
JOHN ADAMS WOLFER, Chicago.
Discussion to be opened by URBAN MAES, New Orleans, and E. STARR JUDD, Rochester, Minn.

The Function of the Liver in Its Relation to Operations on the Gallbladder and Ducts (Lantern Demonstration).
GEORGE W. CRILE, Cleveland.
Discussion to be opened by PHILIP K. GILMAN, San Francisco, and A. S. LOBINGIER, Los Angeles.

The Interrelation of Lesions of the Liver, the Bone Marrow, and the Spleen.
WILLIAM J. MAYO and CHARLES H. MAYO, Rochester, Minn.
Discussion to be opened by WILLIAM D. HAGGARD, Nashville, and JABEZ NORTH JACKSON, Kansas City, Mo.

Local Anesthesia as an Adjunct in the Treatment of Nontuberculous Lesions in Tuberculous Patients (Lantern Demonstration).
STANLEY R. MAXEINER, Minneapolis.
Discussion to be opened by FRANCIS MARION POTTENGER, Monrovia, Calif., and LE ROY S. PETERS, Albuquerque, N. M.

Friday, April 23—9 a. m.

JOINT MEETING OF SECTIONS ON SURGERY, GENERAL AND ABDOMINAL, AND ON NERVOUS AND MENTAL DISEASES

Definite Level Symptoms Suggesting Spinal Tumor: A Study of Thirty-Three Cases in Which Laminectomy Was Done (Lantern Demonstration).
ERNEST SACHS, St. Louis.

SYMPOSIUM ON SYMPATHECTOMY

Physiology of the Sympathetic Nervous System in Relation to Certain Surgical Problems (Lantern Demonstration).
ALEXANDER FORBES and STANLEY COBB, Boston.

Sympathectomy in Spasticities of the Extremities.
LOYAL E. DAVIS and ALLEN B. KANAVEL, Chicago.

Periarterial Sympathectomy.
RAYMOND W. MCNEALY, Chicago.

Sympathectomy in Angina Pectoris (Lantern Demonstration).
ELLIOTT C. CUTLER, Cleveland.

The Anatomy of the Sympathetic Nervous System (Lantern Demonstration).
S. W. RANSON, St. Louis.
Discussion on Papers of DRS. FORBES and COBB, DAVIS and KANAVEL, MCNEALY, CUTLER and RANSON to be opened by HERBERT E. COE, Seattle; CHARLES S. VENABLE, San Antonio, Texas; SAMUEL ALBERT LEVINE, Boston; SAMUEL CLARK HARVEY, New Haven, Conn., and PHILIP KING BROWN, San Francisco.

SECTION ON OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY

MEETS IN AUTOMOBILE-MANUFACTURERS' BUILDING, FAIR PARK

OFFICERS OF SECTION

Chairman—GEORGE GRAY WARD, New York.
Vice Chairman—EMIL NOVAK, Baltimore.
Secretary—CARL HENRY DAVIS, Milwaukee.
Executive Committee—FRANK W. LYNCH, San Francisco; RUDOLPH W. HOLMES, Chicago; GEORGE GRAY WARD, New York.

Wednesday, April 21—2 p. m.

Erosion of the Cervix Uteri, with Observations on Its Causes, Its Development and Its End-Results (Lantern Demonstration).
CAREY CULBERTSON, Chicago.

Chronic Endocervicitis: Its Etiology, Symptomatology and Secondary Pelvic Manifestations.
C. JEFF MILLER, New Orleans.

The Sturmdorf Operation vs. the Cautery in the Treatment of Chronic Endocervicitis (Lantern Demonstration).
HARVEY B. MATTHEWS, Brooklyn.

Diathermy in the Treatment of Gonorrheal Endocervicitis.
B. C. CORBUS and V. J. O'CONOR, Chicago.

Cautery Treatment of Chronic Gonorrhea of the Cervix.
HAROLD W. SHUTTER, Milwaukee.

Syphilis of the Cervix (Lantern Demonstration).
GEORGE GELLHORN, St. Louis.

The Treatment of Cancer of the Uterine Cervix (Lantern Demonstration).
GRANT E. WARD, Baltimore.

Five Year Results in Treatment of Cervical Cancer (Lantern Demonstration).
FRANK W. LYNCH, San Francisco.
Discussion on Papers of DRS. CULBERTSON, MILLER, MATTHEWS, CORBUS and O'CONOR, SHUTTER, GELLHORN, WARD and LYNCH to be opened by ARTHUR H. CURTIS, Chicago.

Thursday, April 22—2 p. m.

The Umbilical Cord (Lantern Demonstration).
NORRIS W. VAUX, Philadelphia.

Sterility: Analysis of Cures and Failures (Lantern Demonstration).
R. L. DICKINSON, New York, and WILLIAM H. CARY, Brooklyn.

Low Calcium as a Cause of Intra-Uterine Mortality.
DONALD MACOMBER, Boston.

Chairman's Address. GEORGE GRAY WARD, New York.

Retrodisplacement in Pregnancy and the Puerperium: A Study of One Thousand Private Cases (Lantern Demonstration).
W. C. DANFORTH and C. E. GALLOWAY, Evanston, Ill.

Morbidity in One Thousand Postpuerperal Women: A Statistical Presentation.
HAROLD A. MILLER, Pittsburgh.

Observations on Thyroid Hypertrophy and Pregnancy (Lantern Demonstration).
CARL HENRY DAVIS, Milwaukee.

Pregnancy Complicating Exophthalmic Goiter and Adenomatous Goiter with Hyperthyroidism (Lantern Demonstration).
ROBERT D. MUSSEY, WILLIAM A. PLUMMER and WALTER M. BOOTHBY, Rochester, Minn.

Friday, April 23—2 p. m.

Election of Officers

Tuberculosis of the Lower Ileum (Lantern Demonstration).
J. EARLE ELSE, Portland, Ore.

Clinical Tests of the Ovarian Follicular Hormone (Lantern Demonstration).
J. P. PRATT, Detroit, and EDGAR ALLEN, Columbia, Mo.

Myomectomy, Hysterectomy and Radium in the Treatment of Uterine Fibromyomas.
JAMES C. MASSON, Rochester, Minn.
Discussion to be opened by W. J. MAYO, Rochester, Minn.

Toxemias of Pregnancy: General Considerations.
JOHN O. POLAK, Brooklyn.

Eclampsia at the Chicago Lying-In Hospital (Lantern Demonstration). J. P. GREENHILL, Chicago.

Eight Hundred and Fifty Cases of Toxemia with Convulsions at the New York Lying-In Hospital.
ASA B. DAVIS, New York.

Magnesium Sulphate in the Treatment of Preeclampsia and Eclampsia.
LYLE G. McNEILE and JOHN VRUWINK, Los Angeles.

SECTION ON OPHTHALMOLOGY

MEETS IN FINE ARTS BUILDING, FAIR PARK

OFFICERS OF SECTION

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Vice Chairman—HARRY FRIEDENWALD, Baltimore.
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Executive Committee—GEORGE S. DERBY, Boston; MARCUS FEINGOLD,* New Orleans; ARNOLD KNAPP, New York.

Fellows are reminded that the meetings of the section will be called to order promptly on the hour scheduled for opening. The formal reading of the papers will be omitted, as reprints of the papers on the program have already been delivered to Fellows.

Each essayist will be given ten minutes in which to summarize the points in his paper and introduce the discussion (except in the case of five minute papers), and five minutes in which to close the discussion.

The Fellows appointed to open the discussion of any paper will be allowed ten minutes. Subsequent speakers will be limited to five minutes.

The papers and all discussions will be printed and bound, forming the Transactions of the Section on Ophthalmology for 1926. Copies of the Transactions may be obtained at $1.50 each, if subscriptions are sent to THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, 535 North Dearborn Street, Chicago, by June 1, as only enough copies are printed to cover subscriptions received to the time of going to press.

Fellows are requested to register in the section registration book at the entrance. The full name and complete postoffice address should be written plainly.

* Deceased.

Wednesday, April 21—9 a. m.

Chairman's Address. ARNOLD KNAPP, New York.

Recurrence of Iritis as Influenced by the Removal of Infections.
E. V. L. BROWN and ERNEST E. IRONS, Chicago.
Discussion to be opened by GEORGE S. DERBY, Boston.

The Prostate as a Remote Focus of Infection in Ocular Inflammations. WILLIAM ZENTMAYER, Philadelphia.
Discussion to be opened by JOHN O. McREYNOLDS, Dallas, Texas.

Ocular Disease Occurring in the Course of Nondysenteric Amebiasis. LLOYD MILLS, Los Angeles.
Discussion to be opened by G. W. JEAN, Santa Barbara, Calif.

Sympathetic Uveitis Caused by the Virus of Herpes Simplex: Report of Experiments (Lantern Demonstration .
S. R. GIFFORD, Omaha.
Discussion to be opened by EVERETT L. GOAR, Houston, Texas.

Retrobulbar Neuritis in Diabetes: Report of Case.
LEE MASTEN FRANCIS and IVAN KOENIG, Buffalo.
Discussion to be opened by D. F. HARBRIDGE, Phoenix, Ariz.

An Ophthalmic Year Book, Why and How.
WILLIAM H. CRISP, Denver.
Discussion to be opened by CHARLES P. SMALL, Chicago.

Ocular Symptoms in Subarachnoid Hemorrhage: A Clinical Consideration (Lantern Demonstration).
F. PHINIZY CALHOUN, Atlanta, Ga.
Discussion to be opened by EDWIN G. ZABRISKIE, New York.

Thursday, April 22—9 a. m.

Radium in Ophthalmology: A Further Study, Experimental and Clinical (Lantern Demonstration).
LAURA A. LANE, Baltimore.
Discussion to be opened by SANFORD M. WITHERS, Denver.

The Aqueous Humor: A Critical and Experimental Study (Lantern Demonstration).
ARTHUR M. YUDKIN, New Haven, Conn.
Discussion to be opened by LAWRENCE T. POST, St. Louis.

Intra-Ocular Sarcoma in Children: A Clinical and Pathologic Study of Ten Cases.
WALTER R. PARKER, Detroit, and WILLIAM H. STOKES, Dallas, Texas.
Discussion to be opened by HENRY C. HADEN, Houston, Texas.

Retinoblastoma and Recent Views of Malignancy.
EDWARD JACKSON, Denver.
Discussion to be opened by W. G. GILLETT, Wichita, Kan.

Refractive Changes. E. C. ELLETT, Memphis, Tenn.
Discussion to be opened by T. B. HOLLOWAY, Philadelphia.

Blepharochalasis: Report of Three Cases (Lantern Demonstration). W. L. BENEDICT, Rochester, Minn.
Discussion to be opened by CONRAD BERENS, JR., New York.

Closure of the Retinal Vessels: Important Aspects in Diagnosis and Management that May Be Overlooked.
L. HERBERT LANIER, Texarkana, Ark.
Discussion to be opened by J. M. WOODSON, Temple, Texas.

Friday, April 23—9 a. m.

Election of Officers

Mucous Membrane from the Middle Turbinate in Plastic Surgery of the Eye. MEYER WIENER, St. Louis.
Discussion to be opened by WILLIAM H. WILDER, Chicago.

The Effect of Viewing Motion Pictures on Visual Acuity: Preliminary Report.
A. RAY IRVINE and M. F. WEYMANN, Los Angeles.
Discussion to be opened by CHARLES A. BAHN, New Orleans.

The Tolerance of Foreign Bodies Within the Eye.
A. E. BULSON, JR., Fort Wayne, Ind.
Discussion to be opened by ANCIL MARTIN, Phoenix, Ariz.

Roentgenologic Investigation on Four Hundred Optic Canals in the Living: Clinical and Anatomic Data.
HARRY A. GOALWIN, New York.
Discussion to be opened by HARRY S. GRADLE, Chicago.

The Anterior Lens Capsule: A Clinical and Pathologic Study (Lantern Demonstration).
ARTHUR J. BEDELL, Albany, N. Y.
Discussion to be opened by W. B. LANCASTER, Boston.

Safeguards in Cataract Expression (Lantern Demonstration).
JOHN GREEN, St. Louis.
Discussion to be opened by CLARENCE KING, Cincinnati.

Color Blindness in Industry (Lantern Demonstration).
ARCHIBALD E. CHACE, Texarkana, Ark.
Discussion to be opened by J. E. JENNINGS, St. Louis.

SECTION ON LARYNGOLOGY, OTOLOGY AND RHINOLOGY

MEETS IN FINE ARTS BUILDING, FAIR PARK

OFFICERS OF SECTION

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Executive Committee—WENDELL C. PHILLIPS, New York; CHARLES W. RICHARDSON, Washington, D. C.; SAMUEL IGLAUER, Cincinnati.

Wednesday, April 21—2 p. m.

Chairman's Address (Lantern Demonstration).
SAMUEL IGLAUER, Cincinnati.

Otolaryngology in General Diseases: Clinical Application of the Experimental Findings in Diseases of Metabolism.
FENTON B. TURCK, New York.
Discussion to be opened by EDWARD H. CARY, Dallas, Texas, and BURT R. SHURLY, Detroit.

Maxillary Deformations (Lantern Demonstration).
HARVEY STALLARD, San Diego, Calif.
Discussion to be opened by FRANK ALBERT BURTON, San Diego, Calif., and THOMAS E. CARMODY, Denver.

The Surgical Treatment of Acute Suppurative Paranasal Sinusitis (Lantern Demonstration).
JOHN J. SHEA, Memphis, Tenn.
Discussion to be opened by R. C. LYNCH, New Orleans, and Ross H. SKILLERN, Philadelphia.

Further Report on the Operative Treatment of Selected Cases of Chronic Peripheral Facial Paralysis (Lantern Demonstration).
WILLIAM SHARPE, New York.
Discussion to be opened by JOSEPH C. BECK, Chicago.

Vertigo: Its Incidence in Endocrine Disorders.
DANA W. DRURY, Boston.
Discussion to be opened by WILLIAM ENGELBACH, St. Louis, and EUGENE R. LEWIS, Los Angeles.

Importance of the Early Diagnosis and Treatment of Laryngeal Tuberculosis (Lantern Demonstration).
FRANK R. SPENCER, Boulder, Colo.
Discussion to be opened by HENRY H. BRIGGS, Asheville, N. C., and JULIUS DWORETZKY, Liberty, N. Y.

Thursday, April 22—2 p. m.

Displacement Irrigation: A New Procedure in the Diagnosis and Conservative Treatment of Posterior Sinus Disease (Lantern Demonstration).
ARTHUR W. PROETZ, St. Louis.
Discussion to be opened by GEORGE M. COATES, Philadelphia, and LOUIS LEVY, Memphis, Tenn.

Two Factors in Catarrhal Deafness: The Lower Turbinate (Technic) and the Sphenoid Sinus (Anatomy) (Lantern Demonstration).
GREENFIELD SLUDER, St. Louis.
Discussion to be opened by GEORGE E. SHAMBAUGH, Chicago, and L. W. DEAN, Iowa City.

Surgical Treatment of Meningitis from Aural Origin (Lantern Demonstration).
WELLS P. EAGLETON, Newark, N. J.
Discussion to be opened by E. R. CARPENTER, Dallas, and C. F. YERGER, Chicago.

Sinus and Jugular Thrombosis (Bilateral) Bilateral Ligation; Recovery: Report of Case.
HILL HASTINGS, Los Angeles.
Discussion to be opened by GEORGE L. TOBEY, Boston, and R. BISHOP CANFIELD, Ann Arbor, Mich.

The Diagnostic Ear Clinic in the Public Schools as a Factor in the Conservation of Hearing (Lantern Demonstration).
HORACE NEWHART, Minneapolis.
Discussion to be opened by C. W. RICHARDSON, Washington, D. C., and AUSTIN A. HAYDEN, Chicago.

Three Million Deafened School Children: Methods for Their Detection and Treatment.
E. P. FOWLER and HARVEY FLETCHER, New York.
Discussion to be opened by HAROLD M. HAYS, New York, and GEORGE L. RICHARDS, Fall River, Mass.

Friday, April 23—2 p. m.

Election of Officers

Exhibition of New Instruments and Appliances

Reports of Committees

Necrology.
WILLIAM B. CHAMBERLIN, Cleveland, Chairman; THOMAS J. HARRIS, New York; GEORGE L. RICHARDS, Fall River, Mass.

Lye Legislation.
CHEVALIER JACKSON, Philadelphia, Chairman; M. F. ARBUCKLE, St. Louis; J. F. BARNHILL, Indianapolis; NELSON M. BLACK, Milwaukee; CHESTER H. BOWERS, Los Angeles; H. H. BRIGGS, Asheville, N. C.; EDMUND T. BROWN, Burlington, Vt.; THOMAS E. CARMODY, Denver; WILLIAM B. CHAMBERLIN, Cleveland; E. FRANK CHASE, Seattle; LEE W. DEAN, Iowa City; W. E. DIXON, Oklahoma City; J. ALEXANDER DONOVAN, Butte, Mont.; WELLS P. EAGLETON, Newark, N. J.; J. A. ELLEGOOD, Wilmington, Del.; F. P. EMERSON, Boston; RALPH A. FENTON, Portland, Ore.; HENRY HALL FORBES, New York; J. ANDRE FULLER, Reno, Nev.; THERON E. FULLER, Texarkana, Ark.; JOHN B. GREGG, Sioux Falls, S. D.; THOMAS H. HALSTED, Syracuse, N. Y.; AUSTIN A. HAYDEN, Chicago; EWING FOX HOWARD, Vicksburg, Miss.; SAMUEL IGLAUER, Cincinnati; C. J. IMPERATORI, New York; J. W. JERVEY, Greenville, S. C.; F. E. KITTREDGE, Nashua, N. H.; JAMES W. LEECH, Providence, R. I.; ROBERT C. LYNCH, New Orleans; EDWARD C. MATTHEWS, Albuquerque, N. M.; H. W. LOEB, St. Louis; RICHMOND MCKINNEY, Memphis, Tenn.; JOHN J. MCLOONE, Phoenix, Ariz.; CLIFTON M. MILLER, Richmond, Va.; T. W. MOORE, Huntington, W. Va.; HORACE NEWHART, Minneapolis; ROBERT L. NOURSE, Boise; H. B. ORTON, Newark, N. J.; ELLEN J. PATTERSON, Pittsburgh; CHARLES W. RICHARDSON, Washington, D. C.; JOHN C. ROBISON, Salt Lake City; DUNBAR ROY, Atlanta, Ga.; MOSES SAVAGE, Baltimore; L. A. SCHIPFER, Bismarck, N. D.; BURT R. SHURLY, Detroit; GREENFIELD SLUDER, St. Louis; E. TERRY SMITH, Hartford, Conn.; GEORGE L. STRADER, Cheyenne, Wyo.; J. A. STUCKY, Lexington, Ky.; ERNEST M. SEYDELL, Wichita, Kan.; H. MARSHALL TAYLOR, Jacksonville, Fla.; C. A. THIGPEN, Montgomery, Ala.; CULLEN F. WELTY, San Francisco; W. P. WHERRY, Omaha; WAITMAN F. ZINN, Baltimore; JOHN O. MCREYNOLDS, Dallas, Texas.

Examining Board in Otolaryngology.
JOSEPH C. BECK, Chicago, Chairman; ROBERT C. LYNCH, New Orleans.

Otorhinologic Hygiene of Swimming.
H. M. TAYLOR, Jacksonville, Fla., Chairman; RALPH A. FENTON, Portland, Ore.; HILL HASTINGS, Los Angeles; M. F. ARBUCKLE, St. Louis; LEE M. HURD, New York.

Joint Committee and Permanent Committee of the Deaf Child and Adult Deaf.
CHARLES W. RICHARDSON, Washington, D. C., Chairman; MAX A. GOLDSTEIN, St. Louis; THOMAS J. HARRIS, New York; E. L. KENYON, Chicago; J. A. STUCKY, Lexington, Ky.; HAROLD WALKER, Boston; HORACE NEWHART, Minneapolis; ISAAC H. JONES, Los Angeles.

Sand Burs in the Larynx: Report of Cases (Lantern Demonstration).
GEORGE F. KEIPER, La Fayette, Ind.
Discussion to be opened by H. MARSHALL TAYLOR, Jacksonville, Fla., and CHEVALIER JACKSON, Philadelphia.

Hysterical Dysphagia.
HERMAN J. MOERSCH, Rochester, Minn.
Discussion to be opened by GABRIEL F. TUCKER, Philadelphia; JOHN B. POTTS, Omaha, and MERWIN C. MYERSON, Brooklyn.

The Thymus Gland (Lantern Demonstration).
WILLIAM W. WASSON, Denver.
Discussion to be opened by HARRIS P. MOSHER, Boston.

Indications for Tonsillectomy in Children Based on End-Results (Lantern Demonstration).
ALBERT D. KAISER, Rochester, N. Y.

Surgical Study of Eight Thousand Tonsillectomies in Children. EDWIN S. INGERSOLL, Rochester N. Y.
Discussion on Papers of DRS. KAISER and INGERSOLL to be opened by HUGH MCCULLOCH, St. Louis, and ROY A. BARLOW, Madison, Wis.

Postoperative Results of Tonsil Operations, a Questionnaire Report. F. J. PRATT, Minneapolis.
Discussion to be opened by SAM E. ROBERTS, Kansas City, Mo., and WILLIAM MITHOEFER, Cincinnati.

SECTION ON DISEASES OF CHILDREN

MEETS IN AUDITORIUM, FAIR PARK

OFFICERS OF SECTION

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Executive Committee—HENRY F. HELMHOLZ, Rochester, Minn.; EDGAR J. HUENEKENS, Minneapolis; CLIFFORD G. GRULEE, Chicago.

Wednesday, April 21—9 a. m.

Chairman's Address. CLIFFORD G. GRULEE, Chicago.
Address. A. ABALLI, Havana, Cuba.
The Breast Feeding Demonstration and the Physician.
F. H. RICHARDSON, Brooklyn.
Breast Feeding Problems (Lantern Demonstration).
C. ULYSSES MOORE, Portland, Ore.
Discussion to be opened by E. J. HUENEKENS, Minneapolis.
Effects of Diet During Pregnancy on the Development of Rickets in the Offspring (Lantern Demonstration).
J. VICTOR GREENBAUM, Cincinnati.
The Plasma Proteins in Orthostatic Albuminuria (Lantern Demonstration). F. W. SCHLUTZ, Minneapolis.
Discussion to be opened by L. R. DE BUYS, New Orleans, and H. F. HELMHOLZ, Rochester, Minn.
Exophthalmic Goiter in Childhood (Lantern Demonstration).
HENRY HELMHOLZ, Rochester, Minn.
The Clinical Study of the Therapy of Pyloric Stenosis in Infants (Lantern Demonstration).
V. DAVID GREER, Houston, Texas.
Discussion to be opened by H. LESLIE MOORE, Dallas, Texas, and H. F. HELMHOLZ, Rochester, Minn.

Thursday, April 22—9 a. m.

SYMPOSIUM ON CHRONIC NONSPECIFIC INFECTIONS OF THE LUNGS AND BRONCHI

General Introduction and Diagnosis (Lantern Demonstration). JOHN LOVETT MORSE, Boston.
Relationship to Infection in Upper Respiratory Area (Lantern Demonstration).
WILLIAM V. MULLIN, Cleveland.
Bronchoscopic Phases of Chronic Nonspecific Infections in the Lung (Lantern Demonstration).
CHEVALIER JACKSON, Philadelphia.
Medical Treatment. JOSEPH BRENNEMAN, Chicago.
Surgical Treatment (Lantern Demonstration).
EVARTS A. GRAHAM, St. Louis.

Friday, April 23—9 a. m.

Election of Officers
Address.
LEON VELASCO BLANCO, Buenos Aires, Argentina.
Twenty-Five Years of Congenital Syphilis: A Comparative and Statistical Study (Lantern Demonstration).
P. H. SYLVESTER, Boston.
Discussion to be opened by P. C. JEANS, Iowa City.
Meckel's Diverticulum as a Cause of Intestinal Hemorrhage: Report of Five Cases.
ISAAC A. ABT and ALFRED A. STRAUSS, Chicago.
The Prevention of Rickets in Premature Infants (Lantern Demonstration). H. J. GERSTENBERGER, Cleveland.
The End-Results of Specific Serum Therapy in Sporadic Meningococcus Meningitis in Infancy and Early Childhood (Lantern Demonstration).
STAFFORD MCLEAN, New York.
Paranasal Sinusitis as a Cause of So-Called Alimentary Intoxication (Lantern Demonstration).
P. C. JEANS and M. L. FLOYD, Iowa City.
Discussion to be opened by M. F. ARBUCKLE, St. Louis, and E. C. MITCHELL, Memphis, Tenn.
Osteomyelitis Variolosa (Lantern Demonstration).
E. J. HUENEKENS and L. C. RIGLER, Minneapolis.
Discussion to be opened by W. L. BROWN, El Paso, Texas.
The Use of Standard Diet Formulas in the Management of Juvenile Diabetes Mellitus (Lantern Demonstration).
J. D. BOYD, Iowa City.

SECTION ON PHARMACOLOGY AND THERAPEUTICS

MEETS IN AUTOMOBILE-MANUFACTURERS' BUILDING, FAIR PARK

OFFICERS OF SECTION

Chairman—THOMAS ORDWAY, Albany, N. Y.
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Executive Committee—PAUL J. HANZLIK, San Francisco; PAUL D. WHITE, Boston; THOMAS ORDWAY, Albany, N. Y.

Wednesday, April 21—9 a. m.

SYMPOSIUM ON CARDIOVASCULAR HYPERTENSIVE DISEASE AND ITS TREATMENT

Measurement of the Cardiac Output and Its Variations (Lantern Demonstration).
G. CANBY ROBINSON, Nashville, Tenn.
The Antipressor Fraction in Liver Tissue, and Its Physiologic Action.
A. A. JAMES, N. B. LAUGHTON and A. BRUCE MACALLUM, London, Ontario, Canada.
The Action of Hepatic Extract in Hypertension (Lantern Demonstration).
RALPH H. MAJOR, Kansas City, Mo.
Treatment of the Peripheral Vascular Disturbances of the Extremities. GEORGE E. BROWN, Rochester, Minn.
The Visceral Manifestations of Diffuse Cardiovascular Hypertensive Disease. JOSEPH L. MILLER, Chicago.

Thursday, April 22—9 a. m.

Chairman's Address. THOMAS ORDWAY, Albany, N. Y.
The Therapeutic Value of the Parathyroid Hormone (Lantern Demonstration).
J. B. COLLIP, Edmonton, Alberta, Canada.
Protein Requirement in Children (Lantern Demonstration).
WALTER M. BARTLETT, Boston.
The Action and Clinical Use of Ephedrine, an Alkaloid Isolated from the Chinese Drug MaHuang (Lantern Demonstration). K. K. CHEN, Madison, Wis.
The Inefficiency of Most Commonly Used Antiseptics in Medicine and Surgery.
MARTIN B. TINKER and HENRY B. SUTTON, Ithaca, N. Y.
Chronic Hereditary and Familial Hemolytic Jaundice with Splenomegaly and Hepatomegaly (Lantern Demonstration). WALTON FOREST DUTTON, Amarillo, Texas.

Friday, April 23—9 a. m.

Election of Officers
Thyroid Therapy and Thyroid Tolerance in Chronic Nephrosis.
ALBERT A. EPSTEIN, New York.
The Use and Abuse of Heliotherapy in Tuberculosis.
SAMUEL H. WATSON, Tucson, Ariz.
Discussion to be opened by E. H. BRUNS, Denver.
The Treatment of Polycythemia Vera (Lantern Demonstration). H. Z. GIFFIN, Rochester, Minn.
Action of Euphyllin in Cardiac Failure Associated with Arteriosclerosis.
FRED M. SMITH, VERNE C. GRABER and GEORGE H. MILLER, Iowa City.
Arachnidism, a Study in Spider Poisoning.
EMIL BOGEN, Los Angeles.

SECTION ON PATHOLOGY AND PHYSIOLOGY

MEETS IN AUTOMOBILE-MANUFACTURERS' BUILDING, FAIR PARK

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Executive Committee—KENNETH M. LYNCH, Dallas, Texas; CHARLES W. GREENE, Columbia, Mo.; HARRY J. CORPER, Denver.

Wednesday, April 21—2 p. m.

Symptoms and Lesions of Avitaminosis (Keratomalacia and Beriberi) Occurring During the Course of Diabetes (Lantern Demonstration).
MICHAEL G. WOHL, Omaha.

Localization in Animals of Bacteria Isolated from Foci of Infection. A. C. NICKEL, Rochester, Minn.

The Etiology and Pathology of Arthritis Deformans as Forecast by Clinical Manifestations.
JOHN V. BARROW, Los Angeles.

Estimating Blood Volume for Clinical Purposes: A Simple, Practical Method.
WILLIAM W. DUKE, Kansas City, Mo.

Menace of the Doubtful Positive Wassermann Reaction.
JAMES HERBERT MITCHELL, Chicago.

Conduction and Contraction of Cardiac Musculature in Water Rigor. CLYDE BROOKS, University, Ala.

Evidences of Diseases as Shown in Fossil and Prehistoric Remains: Paleopathology.
FRANK B. YOUNG, Gering, Neb., and A. L. COOPER, Scottsbluff, Neb.

Thursday, April 22—2 p. m.

Chairman's Address: Absorption from Lower Respiratory Tract. HARRY J. CORPER, Denver.

Aspergillosis of the Lungs and Its Association with Tuberculosis. MARY E. LAPHAM, Highlands, N. C.

Specific Necrosis in the Infectious Granulomas (Lantern Demonstration). ESMOND R. LONG, Chicago.

Mutation Forms of the Tubercle Bacillus.
HENRY C. SWEANY, Chicago.

The Importance of Symbiosis or Close Association of Different Species of Organisms in the Production of Certain Biochemical Phenomena and in the Causation of Certain Diseases and Certain Symptoms of Disease.
ALDO CASTELLANI, New Orleans.

A Study of Granuloma Inguinale (Lantern Demonstration).
J. A. MCINTOSH, Memphis, Tenn.

Friday, April 23—2 p. m.

Election of Officers

Functional Studies Throughout the Course of Roentgen-Ray Nephritis in Dogs.
F. W. HARTMAN and ADOLPH BOLLIGER, Detroit.

Effect of Quinine on Hemolysis in Vitro with Especial Reference to Malarial Hemoglobinuria.
C. C. BASS, New Orleans.

The Use of Colloidal Lead in the Treatment of Cancer.
FRANCIS CARTER WOOD, New York.

Grading of Carcinoma and Its Practical Application.
ALBERT C. BRODERS, Rochester, Minn.

The Personal Equation in the Cancer Problem.
GEORGE A. SOPER, New York.

Functional Studies in Cavernous Sinus Thrombosis as a Guide to Diagnosis, Prognosis and Treatment (Lantern Demonstration).
O. JASON DIXON, Kansas City, Mo.

SECTION ON NERVOUS AND MENTAL DISEASES

MEETS IN AUTOMOBILE-MANUFACTURERS' BUILDING, FAIR PARK

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Vice Chairman—WILLIAM HOUSE, Portland, Ore.
Secretary—LEWIS J. POLLOCK, Chicago.
Executive Committee—Walter F. SCHALLER, San Francisco; EDWIN G. ZABRISKIE, New York; JAMES B. AYER, Boston.

Wednesday, April 21—9 a. m.

Chairman's Address. JAMES B. AYER, Boston.

The Connotation of Constitutional Psychopathic Inferiority Without Psychoses: A Study of Five Hundred Diagnoses. JAMES H. HUDDLESON, New York.

Neuropsychiatric Sequelae of Chorea in Children.
FRANKLIN G. EBAUGH, Denver.

The Social and Economic Aspects of Nervous and Mental Disease. THEODORE DILLER, Pittsburgh.

Cardiac Symptoms in Emotional Conflicts.
SIDNEY I. SCHWAB, St. Louis.

Some Infantile Factors in the Etiology of Hysteria.
M. S. GREGORY, Oklahoma City.

Thursday, April 22—9 a. m.

Election of Officers

Glioma of the Pons Varolii Simulating a Frontomotor Growth (Lantern Demonstration).
TOM B. THROCKMORTON, Des Moines, Iowa.

An Unusual Case of Subacute Combined Cord Degeneration.
WALTER F. SCHALLER, San Francisco.

Neurologic Manifestations in Pernicious Anemia: A New Conception Relative to Etiology (Lantern Demonstration). A. L. SKOOG, Kansas City, Mo.

Aneurysms of the Cerebral Vessels: The Clinical Manifestations and Pathology (Lantern Demonstration).
HARRY L. PARKER, Rochester, Minn.

Secondary Tumors of the Brain.
WALTER D. SHELDEN, Rochester, Minn.

The Use of Lipiodol for the Diagnosing of Intraspinal Lesions: Report of Six Cases.
JULIAN M. WOLFSOHN, San Francisco.

Friday, April 23—9 a. m.

JOINT MEETING OF SECTIONS ON SURGERY, GENERAL AND ABDOMINAL, AND ON NERVOUS AND MENTAL DISEASES

Definite Level Symptoms Suggesting Spinal Tumor: A Study of Thirty-Three Cases in Which Laminectomy Was Done (Lantern Demonstration).
ERNEST SACHS, St. Louis.

SYMPOSIUM ON SYMPATHECTOMY

Physiology of the Sympathetic Nervous System in Relation to Certain Surgical Problems (Lantern Demonstration).
ALEXANDER FORBES and STANLEY COBB, Boston.

Sympathectomy in Spasticities of the Extremities.
LOYAL E. DAVIS and ALLEN B. KANAVEL, Chicago.

Periarterial Sympathectomy.
RAYMOND W. MCNEALY, Chicago.

Sympathectomy in Angina Pectoris (Lantern Demonstration).
ELLIOTT C. CUTLER, Cleveland.

The Anatomy of the Sympathetic Nervous System (Lantern Demonstration). S. W. RANSON, St. Louis.

Discussion on Papers of DRS. FORBES and COBB, DAVIS and KANAVEL, MCNEALY, CUTLER and RANSON to be opened by HERBERT E. COE, Seattle; CHARLES S. VENABLE, San Antonio, Texas; SAMUEL ALBERT LEVINE, Boston; SAMUEL CLARK HARVEY, New Haven, Conn., and PHILIP KING BROWN, San Francisco.

SECTION ON DERMATOLOGY AND SYPHILOLOGY

MEETS IN AUTOMOBILE-MANUFACTURERS' BUILDING, FAIR PARK

OFFICERS OF SECTION

Chairman—FRED WISE, New York.
Vice Chairman—W. L. MCBRIDE, Kansas City, Mo.
Secretary—JAMES HERBERT MITCHELL, Chicago.
Executive Committee—HAROLD N. COLE, Cleveland; JOHN E. LANE, New Haven, Conn.; FRED WISE, New York.

Wednesday, April 21—9 a. m.

Chairman's Address. FRED WISE, New York.

The Use of Malaria Infection in the Treatment of Syphilis of the Central Nervous System.
J. R. DRIVER, JOHN A. GAMMEL and L. J. KARNOSH, Cleveland.

Clinical Notes on the Incidence and Treatment of Interstitial Keratitis in Congenital Syphilis.
W. H. GUY, Pittsburgh.

Further Observations on the Rose Bengal Test for Liver Function, with Particular Reference to Its Use in Therapy of Syphilis (Lantern Demonstration).
N. N. EPSTEIN and J. E. RAUSCHKOLB, Cleveland.

Intravenous Injection of Sodium Iodide in Phagedenic Ulcerations. JEROME KINGSBURY, New York.

An Efficient Treatment of Chancroidal Buboes: Injections of Mencière's Solution (Lantern Demonstration).
H. G. MISKJIAN, Cleveland.

Granuloma Inguinale: Its Prevalence in the United States (Lantern Demonstration). HOWARD FOX, New York.

Thursday, April 22—9 a. m.

Critical Investigation of the Relation of Metabolic End-Products (Uric Acid, Urea, Creatinin) to Eczema and Kindred Disorders.
JEFFREY C. MICHAEL, Houston, Texas.

Roentgen-Ray Idiosyncrasy.
GEORGE M. MACKEE and J. J. ELLER, New York.

A Distinctive and Severe Form of Erysipeloid Among Fish Handlers.
JOSEPH V. KLAUDER and M. J. HARKINS, Philadelphia.

Recurrent Erysipelas: Report of Cases.
I. L. MCGLASSON, San Antonio.

Sporotrichosis, an Occupational Dermatosis.
O. H. FOERSTER and HARRY R. FOERSTER, Milwaukee.

Friday, April 23—9 a. m.

Election of Officers

Ichthyosiform Erythroderma: Report of Two Cases (Lantern Demonstration).
W. H. GOECKERMAN, Rochester, Minn.

Calcification of the Epiderm and Other Structures of the Skin in Connection with Widespread Bone Resorption (Lantern Demonstration).
FRED D. WEIDMAN, Philadelphia, and LOREN W. SHAFFER, Detroit.

Some Aspects of Skin Histopathology.
WALTER J. HIGHMAN, New York.

The Juvenile Type of Acanthosis Nigricans (Lantern Demonstration). L. M. WIEDER, Ann Arbor, Mich.

Colloid Degeneration of the Skin: Report of Case.
KENDALL FROST, Los Angeles.

Granulosis Rubra Nasi (Jadassohn): Report of Case (Lantern Demonstration). B. BARKER BEESON, Chicago.

SECTION ON PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH

MEETS IN AUTOMOBILE-MANUFACTURERS' BUILDING, FAIR PARK

OFFICERS OF SECTION

Chairman—MATTHIAS NICOLL, JR., Albany, N. Y.
Vice Chairman—HERMAN N. BUNDESEN, Chicago.
Secretary—W. F. DRAPER, Washington, D. C.
Executive Committee—W. S. LEATHERS, Nashville, Tenn.; OSCAR DOWLING, Shreveport, La.; MATTHIAS NICOLL, JR., Albany, N. Y.

Wednesday, April 21—2 p. m.

Some Problems in Southern Municipal Health Work.
J. J. DURRETT, Memphis, Tenn.

Chairman's Address: Boundaries of the Public Health Field.
MATTHIAS NICOLL, JR., Albany, N. Y.

The County Health Department, the County Physician, and the Community.
H. S. MUSTARD, Murfreesboro, Tenn.

The Sanitary Officer and County Health Work.
E. L. BISHOP, Nashville, Tenn.
Discussion to be opened by W. S. LEATHERS, Nashville, Tenn.

Rural Sanitation. P. W. COVINGTON, Salt Lake City.
Discussion to be opened by A. T. MCCORMACK, Louisville, Ky., and D. T. BOWDEN, Oklahoma City.

Thursday, April 22—2 p. m.

Public Health Aspects of Quackery.
JAMES STEWART, Jefferson City, Mo.

The Trend of Public Health Work: Is It Eugenic or Dysgenic? MAZYCK P. RAVENEL, Columbia, Mo.
Discussion to be opened by JOHN A. FERRELL, New York.

Relationship of the practicing Physician to the Public Health Program. G. S. LUCKETT, Santa Fe, N. M.
Discussion to be opened by S. W. WELCH, Montgomery, Ala.

The Family Physician's Place in Inspection of School Children. MARY EVELYN BRYDON, Richmond, Va.
Discussion to be opened by F. J. UNDERWOOD, Jackson, Miss.

Every State in the Registration Area Before 1930.
WILMER R. BATT, Washington, D. C.

Resolutions.

Friday, April 23—2 p. m.

Election of Officers

Bacillary Dysentery in Children: A Report on the Use of Oral Vaccines as a Method of Prevention.
HARVEY P. BARRET, Charlotte, N. C.
Discussion to be opened by KENNETH M. LYNCH, Dallas, Texas, and J. R. ASHE, Charlotte, N. C.

The Epidemiology of Poliomyelitis with Reference to Its Mode of Spread. W. L. AYCOCK, Boston.
Discussion to be opened by EDWARD S. GODFREY, JR., Albany, N. Y.

Is Trachoma a Deficiency Disease?
B. FRANKLIN ROYER, New York.
Discussion to be opened by J. A. STUCKY, Lexington, Ky.

Breaking the Vicious Circle in Florida Tourist Camps.
J. M. LOWREY, Miami, Fla.
Discussion to be opened by B. L. ARMS, Jacksonville, Fla., and E. C. LEVY, Tampa, Fla.

Protective Health Measures on the United States-Mexico Border. J. W. TAPPAN, El Paso, Texas.
Discussion to be opened by H. O. SAPPINGTON, Austin, Texas, and FELIX P. MILLER, El Paso, Texas.

SECTION ON UROLOGY

MEETS IN AUTOMOBILE-MANUFACTURERS' BUILDING, FAIR PARK

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Wednesday, April 21—2 p. m.

Stricture of the Female Urethra.
WINFIELD SCOTT PUGH, New York.

Leukoplakia of the Bladder (Lantern Demonstration).
RUSSELL A. HENNESSEY, Memphis, Tenn.

Cystometric Determination of Bladder Pressure—Presentation of Instrument (Lantern Demonstration).
D. K. ROSE, St. Louis.

Resection of Obstructions at the Vesical Orifice (Lantern Demonstration). MAXIMILIAN STERN, New York.

Spinal Anesthesia: A Review of More Than Six Thousand Cases in the Los Angeles General Hospital, with Especial Consideration of Genito-Urinary Operations.
HARRY W. MARTIN and RACHEL E. ARBUTHNOT, Los Angeles.

Thursday, April 22—2 p. m.

Chairman's Address: Influence of Urology on Longevity.
B. A. THOMAS, Philadelphia.

Prognosis in Chronic Pyelonephritis (Lantern Demonstration). W. F. BRAASCH, Rochester, Minn.

SYMPOSIUM ON THE TREATMENT OF BLADDER CARCINOMA

Radical Surgical Treatment of Bladder Carcinoma (Lantern Demonstration).
EDWARD STARR JUDD, Rochester, Minn.

Treatment of Bladder Carcinoma by Diathermy (Lantern Demonstration).
JOHN H. CUNNINGHAM, JR., and ROGER C. GRAVES, Boston.

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* Deceased.

Radium Treatment of Carcinoma of the Bladder.
ALFRED I. FOLSOM, Dallas, Texas.

Deep Roentgen-Ray Therapy of Bladder Carcinoma.
CHARLES ALEXANDER WATERS, Baltimore.

Ureteral Transplantation in Bladder Carcinoma: Technic and Utility. ARTHUR L. CHUTE, Boston.

Friday, April 23—2 p. m.

Election of Officers

Postmortem Ureteropyelographic Study of Urinary Tracts of Infants and Children: Its Practical Application in Urologic Diagnosis and Treatment of Children (Lantern Demonstration).
CLINTON K. SMITH, Kansas City, Mo.

Bilateral Pyelo-Ureterograms (Lantern Demonstration).
ABRAHAM MATTES, New Orleans.

Preoperative Diagnosis of Horseshoe Kidney (Lantern Demonstration). HERMAN L. KRETSCHMER, Chicago.

Diagnosis of Renal Tuberculosis
WILLIAM E. STEVENS, San Francisco.

Nephropexy for Ptosis Causing Ureteral Kinks (Lantern Demonstration). C. E. BURFORD, St. Louis.

Stricture of the Ureter in Males.
NELSE F. OCKERBLAD, Kansas City, Mo.

SECTION ON ORTHOPEDIC SURGERY

MEETS IN AUTOMOBILE-MANUFACTURERS' BUILDING, FAIR PARK

OFFICERS OF SECTION

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Vice Chairman—J. P. LORD, Omaha.

Secretary—JAMES ARCHER O'REILLY, St. Louis.

Executive Committee—HENRY B. THOMAS, Chicago; F. J. GAENSLEN, Milwaukee; FRANK R. OBER, Boston.

Wednesday, April 21—2 p. m.

Fractures of the Shaft of the Femur (Lantern Demonstration). W. K. WEST, Oklahoma City.
Discussion to be opened by LEROY C. ABBOTT, St. Louis; SAM WEBB, JR., Dallas, Texas, and J. S. SPEED, Memphis, Tenn.

On Removing Splints and Braces from the Patient (Lantern Demonstration). EMIL S. GEIST, Minneapolis.
Discussion to be opened by FRANK R. OBER, Boston; HENRY W. MEYERDING, Rochester, Minn., and F. J. GAENSLEN, Milwaukee.

Etiology and Pathology of Arthritis.
RALPH PEMBERTON, Philadelphia.
Discussion to be opened by C. L. Lowman, Los Angeles; FRANK R. OBER, Boston, and WALTER G. STERN, Cleveland.

Paranasal Cell Infection as a Cause of Infectious Arthritis (Lantern Demonstration). M. F. ARBUCKLE, St. Louis.
Discussion to be opened by W. K. WEST, Oklahoma City; ROBERT CALDWELL, Little Rock, Ark., and JOHN O. MCREYNOLDS, Dallas, Texas.

The Value of the Intracutaneous Salt Solution Test in Circulatory Disturbances of the Lower Extremities (Lantern Demonstration).
WALTER G. STERN and MILTON B. COHEN, Cleveland.
Discussion to be opened by BARNEY BROOKS, Nashville, and FRED J. GAENSLEN, Milwaukee.

Heliotherapy with Reference to the Treatment of Tuberculosis of the Spine (Lantern Demonstration).
RALPH K. GHORMLEY, Boston.
Discussion to be opened by WILLIS C. CAMPBELL, Memphis, Tenn.; W. B. CARRELL, Dallas, Texas; JEREMIAH METZGER, Tucson, Ariz., and CHARLES E. SEVIER, Colorado Springs, Colo.

The Rôle of Iliolumbar Ligaments in Low Back Strain Cases (Lantern Demonstration).
C. L. LOWMAN, Los Angeles.
Discussion to be opened by EMIL S. GEIST, Minneapolis, and RALPH K. GHORMLEY, Boston.

Thursday, April 22—2 p. m.

Dislocation of the Carpal Semilunar Bone (Lantern Demonstration). EARL D. MCBRIDE, Oklahoma City.
Discussion to be opened by FRED J. GAENSLEN, Milwaukee; PHILIP H. KREUSCHER, Chicago; JAMES R. BOST, Houston, Texas, and CHARLES F. CLAYTON, Fort Worth, Texas.

A New Operation for the Correction of Moderate Claw Foot (Lantern Demonstration).
FRANK D. DICKSON and REX L. DIVELEY, Kansas City, Mo.
Discussion to be opened by WILLIS C. CAMPBELL, Memphis, Tenn.; HENRY W. MEYERDING, Rochester, Minn., and C. L. LOWMAN, Los Angeles.

Chairman's Address: Diagnosis in Orthopedic Surgery.
FRANK R. OBER, Boston.

The Pathology and Prognosis of Bone Tumors (Lantern Demonstration).
W. C. MACCARTY, Rochester, Minn.
Discussion to be opened by JOSEPH C. BLOODGOOD, Baltimore; FRANK D. DICKSON, Kansas City, Mo., and J. S. SPEED, Memphis, Tenn.

The Differential Diagnosis of Bone Tumors (Lantern Demonstration). HENRY W. MEYERDING, Rochester, Minn.
Discussion to be opened by FRED H. ALBEE, New York; H. B. THOMAS, Chicago, and E. C. ERNST, St. Louis.

Ossifying Hematoma (Lantern Demonstration).
C. A. STONE, St. Louis.
Discussion to be opened by SAM WEBB, JR., Dallas, Texas, and WALTER G. STERN, Cleveland.

Orthopedic Problems of Leprosy (Lantern Demonstration).
P. A. MCILHENNY, New Orleans.
Discussion to be opened by O. E. DENNEY, Carville, La., and RALPH HOPKINS, New Orleans.

Friday, April 23—2 p. m.

Election of Officers

Some Diagnostic Problems Presented by the Hip in Early Life (Lantern Demonstration).
J. ALBERT KEY, St. Louis.
Discussion to be opened by RALPH K. GHORMLEY, Boston, and LEROY C. ABBOTT, St. Louis.

Common Hip Joint Diseases (Lantern Demonstration).
LEROY C. ABBOTT, St. Louis.
Discussion to be opened by FRANK D. DICKSON, Kansas City, Mo., and WILLIS C. CAMPBELL, Memphis, Tenn.

Reconstruction of the Hip Joint (Lantern Demonstration).
J. S. SPEED, Memphis, Tenn.
Discussion to be opened by HENRY W. MEYERDING, Rochester, Minn.; Fred H. ALBEE, New York, and WALTER G. STERN, Cleveland.

Treatment of Contractures at the Knees (Lantern Demonstration). JOHN P. LORD, Omaha.
Discussion to be opened by CHARLES A. PARKER, Chicago; EMIL S. GEIST, Minneapolis, and JOHN T. O'FERRALL, New Orleans.

A Study of Spondylolisthesis with Especial Reference to the Cauda Equina (Lantern Demonstration).
ESLIE ASBURY, Cincinnati.
Discussion to be opened by HENRY W. MEYERDING, Rochester, Minn.; C. L. LOWMAN, Los Angeles, and J. ARCHER O'REILLY, St. Louis.

SECTION ON GASTRO-ENTEROLOGY AND PROCTOLOGY

MEETS IN AUTOMOBILE-MANUFACTURERS' BUILDING, FAIR PARK

OFFICERS OF SECTION

Chairman—SIDNEY K. SIMON, New Orleans.

Vice Chairman—JEROME M. LYNCH, New York.

Secretary—FRANK SMITHIES, Chicago.

Executive Committee—FRANKLIN W. WHITE, Boston; RALPH W. JACKSON, Fall River, Mass.; SIDNEY K. SIMON, New Orleans.

Wednesday, April 21—9 a. m.

The Value of the String Test in Cases of Gastric and Duodenal Ulcer. JACOB E. MEENGS, Grand Rapids, Mich.
Discussion to be opened by MAX EINHORN, New York, and CHARLES G. LUCAS, Louisville, Ky.

The Alkaline Tide in Achlorhydria.
SAMUEL A. MUNFORD and ROGER S. HUBBARD, Clifton Springs, N. Y.
Discussion to be opened by ANTON J. CARLSON, Chicago, and DANIEL N. SILVERMAN, New Orleans.

Gastric Cancer: Present Status of Diagnosis and Prognosis (Lantern Demonstration).
GEORGE B. EUSTERMAN, Rochester, Minn.
Discussion to be opened by MILTON M. PORTIS, Chicago, and HORACE W. SOPER, St. Louis.

Hodgkin's Disease of the Abdominal Type: Report of a Group of Cases.
GEORGE P. MULLER and RUSSELL S. BOLES, Philadelphia.
Discussion to be opened by DAVID RIESMAN, Philadelphia, and JOHN H. MUSSER, JR., New Orleans.

Hemorrhoids (Lantern Demonstration).
J. RAWSON PENNINGTON, Chicago.
Discussion to be opened by CHARLES M. ROSSER, Dallas, Texas, and J. F. MONTAGUE, New York.

Clinical Variations in Negro Proctology: The Venereal Factor (Lantern Demonstration).
CURTICE ROSSER, Dallas, Texas.
Discussion to be opened by J. RAWSON PENNINGTON, Chicago, and COLLIER F. MARTIN, Philadelphia.

Thursday, April 22—9 a. m.

Chairman's Address: The Teaching of Gastro-Enterology in Our Medical Schools.
SIDNEY K. SIMON, New Orleans.

Congenital Abnormalities of the Omentum in Relation to Gastro-Intestinal Disease.
JOHN W. DRAPER and R. K. JOHNSON, New York.
Discussion to be opened by G. REESE SATTERLEE, New York, and JOHN BRYANT, Boston.

Spastic Esophagus and Mucous Colitis: Studies in the Etiology and the Treatment by Progressive Relaxation (Lantern Demonstration).
EDMUND JACOBSON, Chicago.
Discussion to be opened by MARTIN E. REHFUSS, Philadelphia, and FRANKLIN W. WHITE, Boston.

Epigastric Hernia, with Especial Reference to Its Diagnostic Importance in Gastro-Intestinal Affections (Lantern Demonstration).
JULIUS FRIEDENWALD and THEODORE H. MORRISON, Baltimore.
Discussion to be opened by ALEXIUS MCGLANNAN, Baltimore, and JOHN A. LICHTY, Clifton Springs, N. Y.

The Clinical Effects of Abnormalities in the Portal Circulation on the Gastro-Intestinal Tract.
J. F. MONTAGUE, New York.
Discussion to be opened by D. C. MCKENNY, Buffalo, and LOUIS A. BUIE, ochester, Minn.

The Treatment of the Psychoneuroses by the Removal of Focal Infections, with Especial Reference to Colectomy and Cecocolectomy. E. C. DUDLEY, Chicago.
Discussion to be opened by HENRY A. COTTON, Trenton, N. J., and HARLOW BROOKS, New York.

Cholecystitis and Its Relation to Pancreatitis (Lantern Demonstration). W. HOWARD BARBER, New York.
Discussion to be opened by WILLIAM F. CHENEY, San Francisco, and FRANK SMITHIES, Chicago.

Cholecystography: Its Interpretation and Clinical Application. JOHN J. GILBRIDE, Philadelphia.
Discussion to be opened by EDWARD STARR JUDD, Rochester, Minn., and EVARTS A. GRAHAM, St. Louis.

Friday, April 23—9 a. m.

Election of Officers

A Clinical Analysis of Intestinal Flagellate Infestation.
KENNETH M. LYNCH, Dallas, Texas.
Discussion to be opened by ALDO CASTELLANI, New Orleans, and GEORGE A. GRAY, San Jose, Calif.

Chronic Ulcerative Colitis.
LOUIS A. BUIE, Rochester, Minn.
Discussion to be opened by JEROME M. LYNCH, New York, and JOHN M. BLACKFORD, Seattle.

Calcium, Carbon Dioxide and Chloride Content of Venous Blood in Cases of Gastric Ulcer Treated with Alkalis.
SARA M. JORDAN, Boston.
Discussion to be opened by JOHN L. KANTOR, New York, and CHARLES S. MCVICAR, Rochester, Minn.

Cardio-Esophageal Relaxation (Lantern Demonstration).
S. A. ROBINS and I. R. JANKELSON, Boston.
Discussion to be opened by CHARLES L. MARTIN, Dallas, Texas, and WALTER C. ALVAREZ, San Francisco.

Duodenal Stagnation (Lantern Demonstration).
ERNEST CLYDE FISHBAUGH, Los Angeles.
Discussion to be opened by GEORGE B. EUSTERMAN, Rochester, Minn., and JULIUS FRIEDENWALD, Baltimore.

SECTION ON RADIOLOGY

MEETS IN AUTOMOBILE-MANUFACTURERS' BUILDING, FAIR PARK

OFFICERS OF SECTION

Chairman—A. C. CHRISTIE, Washington, D. C.
Vice Chairman—HARRY IMBODEN, New York.
Secretary—M. J. HUBENY, Chicago.

Wednesday, April 21—9 a. m.

Chairman's Address (Lantern Demonstration).
A. C. CHRISTIE, Washington, D. C.

The Teaching of Radiology.
C. THURSTON HOLLAND, Liverpool, England.

Infectious Osteomyelitis: Differential Diagnosis.
RALPH S. BROMER, Philadelphia.
Discussion to be opened by J. W. CATHCART, El Paso, Texas.

New Position for Making Roentgenogram of the Mastoid (Lantern Demonstration).
AMÉDÉE GRANGER, New Orleans.
Discussion to be opened by BERTRAM C. CUSHWAY, Chicago.

Renal and Other Retroperitoneal Tumors: Value of Radiography and Supplementary Methods (Lantern Demonstration).
DANIEL N. EISENDRATH and IRVIN S. KOLL, Chicago.

The Value of the Pyelogram and Cystogram in Abdominal Diagnosis from the Standpoint of the Roentgenologist.
BUNDY ALLEN, Iowa City.
Discussion to be opened by THOMAS A. BURCHAM, Des Moines, Iowa.

Gastric Retention of Vegetable Matter.
LLOYD BRYAN, San Francisco.
Discussion to be opened by W. W. WATKINS, Phoenix, Ariz.

Thursday, April 22—9 a. m.

Pathologic Changes in Lung Tissue as the Result of Foreign Bodies of Long Sojourn (Lantern Demonstration).
WILLIS F. MANGES, Philadelphia.
Discussion to be opened by GEORGE W. HOLMES, Boston.

Pleural Effusions, General and Local: Their Recognition, Localization and Differential Diagnosis (Lantern Demonstration). L. R. SANTE, St. Louis.

Roentgenologic Study of Hemoptysis (Lantern Demonstration). LAWRENCE REYNOLDS, Detroit.

Roentgenologic Aspects of Various Types of Hernia (Lantern Demonstration).
JAMES T. CASE and W. O. UPSON, Battle Creek, Mich.
Discussion to be opened by JAMES C. MASSON, Rochester, Minn.

Cholecystography: Further Observations (Lantern Demonstration). SHERWOOD MOORE, St. Louis.
Discussion to be opened by L. P. GAY, St. Louis.

Roentgen-Ray Studies of the Appendix, Cecum and Ascending Colon. BENJAMIN H. ORNDOFF, Chicago.
Discussion to be opened by T. D. CUNNINGHAM, Denver.

Radon (Radium Emanation) as a Palliative Agent in the Treatment of Intra-Oral Cancer.
FRANK E. SIMPSON and ROY E. FLESHER, Chicago.

Friday, April 23—9 a. m.

Election of Officers

Hodgkin's Disease and Lymphosarcoma, with Especial Reference to Their Treatment by Radiation (Lantern Demonstration). CURTIS F. BURNAM, Baltimore.

Surgical Diathermy as an Aid to Radiotherapy in the Treatment of Malignancy, with Especial Reference to Malignancy Within the Mouth.
W. S. LAWRENCE, Memphis, Tenn.
Discussion to be opened by GRANT E. WARD, Baltimore.

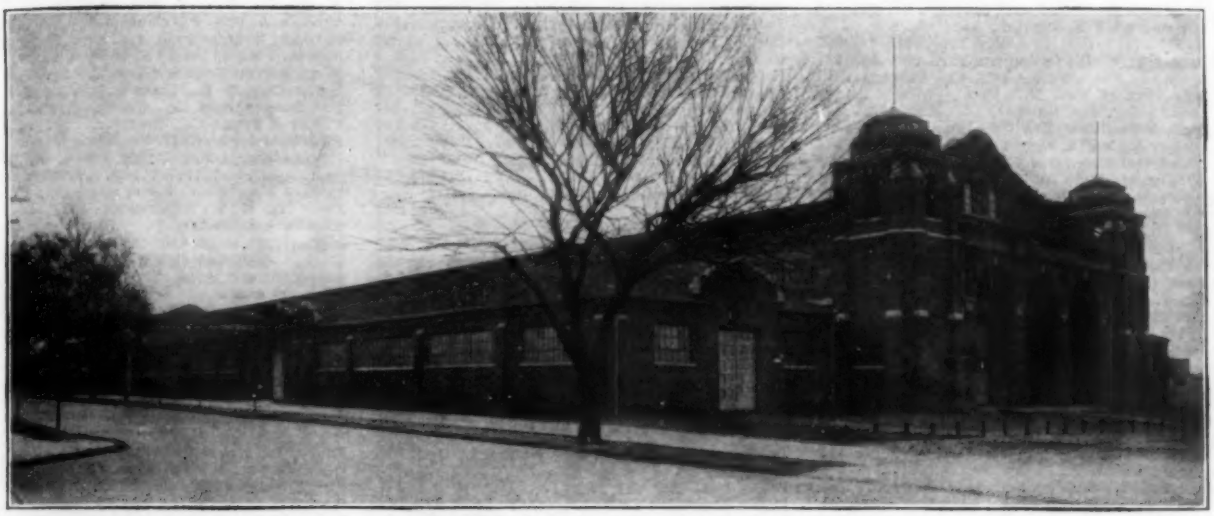
The Treatment of Inoperable Carcinomas of the Urinary Bladder with Roentgen Rays (Lantern Demonstration).
HENRY SCHMITZ, Chicago.
Discussion to be opened by H. L. KRETSCHMER, Chicago.

The Psychoneuroses of the Artificial Menopause.
JAMES A. CORSCADEN, New York.

Shortening the Quarantine Period for Diphtheria Convalescents and Carriers.
SANFORD M. WITHERS and JOHN R. RANSON, Denver.

Roentgen-Ray Therapy of Exudative Iritis.
E. C. SAMUEL and E. R. BOWIE, New Orleans.

THE TECHNICAL EXHIBITS



CONVENTION AND EXHIBIT HALL

In the days of the venerable saddlebag doctor, a national exposition of medical supply firms would have been a small affair. Practice then was relatively simple and the physican's needs were few.

But the doctor of today is heir to a great legacy of new and better methods—so great indeed as to call into existence large and highly specialized industries to supply the necessities for the modern scientific practice of medicine.

The purpose of the technical exhibits at the annual Convention is to show the visiting physician the very best that industry produces for his needs. At Dallas the representative firms of the entire United States will come together and form one large, orderly, national exposition. A great world's fair would probably not present such a showing of things that intimately concern the work of the physician.

The very fact that medical practice has become highly developed and complicated makes an exposition of this nature all the more valuable to the visitor. In the olden days it was not difficult for the physician to choose his equipment. There was little to choose. For example, in the matter of books, so great a volume of information on medical subjects is now extant that one can read only a fractional part of it. Books must be chosen with discrimination and fortunate indeed is the Convention visitor who plans to spend ample time among the publishers' exhibits, for he can actually see and examine the leading productions of most of the medical book publishers. It is a wonderful opportunity to become acquainted with books.

The same applies to pharmaceuticals, biologicals, instruments, apparatus, infant foods. The great pharmaceutical firms will have at hand specimens of standard remedies made by refined, accurate manufacturing processes. They will exhibit many new medicinal agents. Biological preparations, serums and vaccines, including the newly developed scarlet fever toxins and antitoxins, will be fully represented and capable scientific attendants will give full information.

With a growing interest in physiotherapy, the exhibits of the electrotherapeutic manufacturers will take on an added significance this year. Extensive displays of roentgen ray and other electric apparatus will be an important part of the exposition. Technical experts will be present at each booth to answer questions and explain problems of technic. The latest models of apparatus for diagnosis, anesthesia and other medical uses will be generously represented.

Those interested in problems of diet for infants or convalescents will find leading manufacturers of special food preparations present with experienced men ready to explain the uses of their various foods.

Repeated visits to Exhibit Hall will prove stimulating and profitable. The hall will be open daily from 8 a. m. to 6 p. m. (Friday, 8 a. m. to 4 p. m.). It will afford a convenient place to meet friends or to spend the time between section meetings. The visitor may feel free to ask questions or examine exhibits without being unduly importuned or obligated to purchase.

On the following page is given the list of exhibitors with booth numbers. Following this list are brief descriptions of some of the exhibits. This is by no means complete, inasmuch as some firms had failed to send in their descriptions at the time of going to press. At the end of the descriptive matter is a diagram of Exhibit Hall. It will be noted that the hall is laid out by avenues—from First to Fifth Avenue—the booths along each avenue being correspondingly numbered from 100 to 500. Thus any particular exhibit can be readily located. For example, booth 240 will be found on Second Avenue toward the rear of Exhibit Hall.

WILL C. BRAUN,
Business Manager.

List of Exhibitors

See Floor Plan of Exhibit Hall on Page 797

Name.	Space No.
Abbott Laboratories, North Chicago, Ill.	317-529
Acme-Internat'l X-Ray Co., Inc., Chicago	219-221-322
Allison Co., W. D., Indianapolis	335-337
Ambulatory Pneu. Splint Mfg. Co., Chicago	316
Amer. Assn. of Med. Milk Com., Chicago	242
American Opt. Co., Dallas	125
American Sterilizer Co., Erie, Pa.	405
Appleton & Co., D., New York	101
Armand Company, Des Moines, Ia.	142B
Bard, Inc., C. R., New York	414
Bard-Parker Co., New York	124
Battle Creek Food Co., Battle Creek, Mich.	133
Baum Co., Inc., W. A., New York	216-307
Bausch & Lomb Opt. Co., Rochester, N.Y.	108-110
B. B. T. Corporation, Philadelphia	409
Becton, Dickinson Co., Rutherford, N. J.	344-346-348
Berger Bros. Co., New Haven, Conn.	306
Betz Co., Frank S., Hammond, Ind.	211-213
Blakiston's Son & Co., P., Philadelphia	200
Brady & Co., Geo. W., Chicago	327
Buck X-Ograph Co., St. Louis	331-333
Burdick Cabinet Co., Milton, Wis.	319-321-323
Cambridge Instrument Co., Ossining, N. Y.	113
Cameron's Surg. Spec. Co., Chicago	150-503
Canada Dry Ginger Ale, New York	511
Cary Co., The A. P., Dallas	147-149
Castle Co., Wilmot, Rochester, N. Y.	106
Cellosilk Mfg. Co., Chicago	206
Central X-Ray Co., Chicago	330
Cilkloid Co., Marshalltown, Ia.	140A
Collins, Warren E., Boston	310
Continental Scale Works, Chicago	516
Cook Laboratories, Chicago	210
Cragmor Sanat., Colorado Springs, Colo.	240
Cutter Laboratories, Berkeley, Calif.	107
Davis Co., F. A., Philadelphia	123
Dennos Food Co., Chicago	527
Dermatological Research Lab., Chicago	529
Desbell Lab., Inc., Chicago	502-504
DeVilbiss Mfg. Co., Toledo, O.	513-515
Doniger & Co., S., New York	145
Dry Milk Co., The, New York	326-328
Eastman Kodak Co., Rochester, N. Y.	118-120-122
Fischer & Co., H. G., Chicago	111-208
Flanders-Day Co., Boston	411
Foregger Co., Inc., New York	132
French Screen Co., Detroit	140B
Gateway Club, El Paso Tex.	514
General X-Ray Co., Boston	235-237
Graybar Electric Co., New York	136-138
Hanovia Chem. & Mfg. Co., Newark, N. J.	121-214
High Tension Co., Union City, N. J.	143-236
Hoeber, Inc., Paul B., New York	501
Hoffman-La Roche Chem. Wks., New York	139-141
Horlick's Malted Milk Corp., Racine, Wis.	218-220
Hynson, Westcott & Dunning, Baltimore	209-308
Ideal Metal Furniture Co., Los Angeles	339
Johnson Co., Mead, Evansville, Ind.	228-230-232
Johnson-North X-Ray Co., Dallas	324
K. C. Oxygen & Gas Co., Kansas City, Mo.	128
Kelley-Koett Mfg. Co., Covington, Ky.	343-345
Kellogg Co., Battle Creek, Mich.	151
Kioman Inst. Co., Washington, D. C.	403
Knox Gelatine Co., Jamestown, N. Y.	135-137
Kny-Scherer Corp., New York	205
Laboratory Prod. Co., Cleveland	117
LaMotte Chemical Co., Baltimore	525
Lea & Febiger, Philadelphia	301
Lederle Antitoxin Lab., New York	148
Lehn & Fink Products Co., New York	104
Leitz, Inc., E., New York	234
Liebel-Flarsheim Co., Cincinnati	229-332
Linen Underwear Co., Greenwich, N. Y.	227
Lippincott Co., J. B., Philadelphia	212
Login Bros., Chicago	502
MacGregor Inst. Co., Needham, Mass.	506
Macmillan Company, New York	410
Mallinckrodt Chem. Wks., St. Louis	105
Maltbie Chemical Co., Newark, N. J.	129
Massillon Rubber Co., Massillon, Ohio	305
McClure Co., E. H., Dallas	409
McIntosh Elec. Corp., Chicago	231-334
Mellin's Food Co., Boston	312-315
Merrell Co., Wm. S., Cincinnati	404-406
Merrell-Soule Co., Syracuse, N. Y.	303-402
Metz Lab., Inc., H. A., New York	311
Meyrowitz Surg. Inst. Co., New York	329
Mosby Co., C. V., St. Louis	500
Muckle Co., Paul V., Denver	144A
Mueller & Co., V., Chicago	202-204
National Radium Prod. Co., New York	138
Nelson & Sons, Thos., New York	102
Nestle's Food Co., New York	203
Patch Co., E. L., Boston	518-520
Patterson Screen Co., Towanda, Pa.	225
Pelton & Crane Co., Detroit	134
Pfau's American Inst. Co., New York	304
Postum Cereal Co., Battle Creek, Mich.	239-241-243-245
Powers-Weightman-Rosengarton Co., Phila.	127
Prior Co., W. F., Hagerstown, Md.	400
Prometheus Electric Co., New York	341
Radiograph-Scope Co., Greensboro, N. C.	519
Radium Chemical Co., Pittsburgh	415
Safety Anaes. Appl. Concern, Chicago	207
Sanborn Company, Boston	100
Sanit. and Hosp. Equip. Co., Battle Creek, Mich.	131-224
Saunders Co., W. B., Philadelphia	201-300
Scanlan-Morris Co., Madison, Wis.	413
Schoedinger, F. O., Columbus, Ohio	407
Sharp & Smith, Chicago	521-523
Siebrandt Mfg. Co., J. R., Kan. City, Mo.	325
Sklar Mfg. Co., J., Brooklyn	412
Smith, Inc., Upsher, Minneapolis	141B
Sorensen Co., Inc., C. M., L. I. C., N. Y.	507-509
Spencer Lens Co., Buffalo	126
Squibb & Sons, E. R., New York	309-408
Standard-Engeln Corp., Chicago-Cleveland	338-340-342
Swan-Myers Co., Indianapolis	103
Taylor Inst. Co., Rochester, N. Y.	112-114-116
Terrell Supply Co., Fort Worth, Texas	505
Thompson's Malted Food Co., Waukesha, Wis.	244
Thompson-Plaster X-Ray Co., Leesburg, Va.	146
Toledo Tech. Appl. Co., Toledo	222
Victor X-Ray Corp., Chicago	215-217-316-318-320
Walstrom Optical Co., Dallas	226
Wappler Electric Co., L. I. C., N. Y.	233-336
Welch Grape Juice Co., Westfield, N. Y.	223
Wood & Co., Wm., New York	401
Zeiss Jena Agency, Carl, New York	302
Zemmer Co., Pittsburgh	130

APPARATUS, DIAGNOSTIC AND TREATMENT

The advantages of the Ambulatory Pneumatic Splint for fractures of the hip, thigh, leg and ankle will be demonstrated in Space 316 by the Ambulatory Pneumatic Splint Mfg. Company. This device permits walking treatment of fractures and will be shown in actual use. The exhibit will also include the Pneumatic Arm Splint for fractures of the humerus and bones of the forearm. "Ambumatic" Washable Abdominal Supporter Corset Binders and the "Miracle" Artificial Hands, Arms and Orthopedic Appliances will be demonstrated.

"A new era in diagnosis and surgery —an era of high visibility realized" is the description given by members of the profession who have seen and are using the Electro diagnostic and operating equipment for transillumination, direct illumination, diagnosis, simplified technic, cauterization and improved instrumentation. A complete demonstration of the Electrodiagnostoset will be given in Booths 150 and 503 by Cameron Surgical Specialty Company, Chicago.

A Universal Metric Gas Machine will be the principal attraction in the booth of The Foregger Company, Inc., known as the manufacturers of the Gwathmey Apparatus. How this machine measures correctly the flow of seven different gases will be fully explained to all visitors. Booth 132.

The MacKenzie Ink Polygraph will be shown in actual use by the E. Leitz Company in Booth 234. An assortment of microscopes ranging from pocket size to a complete research binocular type will be included in this exhibit. There will be many instruments of an entirely new construction—a laboratory and hospital model microscope, a photomicrographic camera attachment—and a complete assortment of colorimeters. The Feinblatt blood transfusion apparatus will be featured.

All necessary aids to diagnosis and treatment in nose, throat and ear work have been incorporated into the Imperatori Treatment and Diagnostic Unit, a suction and pressure apparatus built by the J. Sklar Manufacturing Company who will occupy Booth 412. This is a four cylinder outfit, providing for simultaneous or separate use of suction or pressure without intercommunication. The Stein-O-Lite and Dr. Harry Koster's Blood Transfusion Apparatus will also be displayed.

A new piece of equipment for nose and throat work, the "De Luxe," will be featured in the exhibit of C. M. Sorensen Company, Inc. This is a highly improved eight-drawer cabinet containing separate pumps for pressure and for suction with a very complete system of controls. Booths 507-509.

The McKesson Appliances, which include the Gas-Oxygen Machine, the Recording Metabolor, the McKesson Special for obstetrics and minor surgery, the McKesson Surgical Pump and the small McKesson T. & A. Pump, will be shown by the Toledo Technical Appliance Company in Space 222. The manufacturer has new things to tell visitors and all are urged to make special effort to call and talk with the attendants.

Sterilizers in operation will be shown in the Wilmot Castle exhibit. Trained representatives of the company will be present to explain the necessity of complete sterilization for dressings and water, as well as for instruments. New points of technique, whereby dressings, water and instruments may all be sterilized in a convenient and practical way, will be presented. Space 106.

APPARATUS FOR METABOLISM TESTING

The Benedict-Roth Metabolism Apparatus, with a new improved Chronokymograph, will be the principal feature of the exhibit by Warren E. Collins in Booth 310. A new apparatus will also be shown for the first time—the Benedict Oxy-Calorimeter. This is a late development of the Carnegie Nutrition Laboratory, which provides a simple, accurate means for determining the calories in foods, excreta and fuels. Actual demonstrations will be made.

The Sanborn Grafic, a simplified oxygen consumption apparatus, with Kymograf; also the Sanborn Benedict for metabolism testing will be featured by the Sanborn Company in Booth 100. The new 1926 model shows interesting improvements, among them the Kymograf as an integral part for recording a grafic chart of the metabolism test. The Sanborn Electrocardiograf for scientific heart examination will also be

shown. Being transportable it will be of interest for either hospital or office use.

APPARATUS, ELECTRO-THERAPEUTIC

With capacity sufficient for all diagnostic work and occupying an extremely small space, the Precision Type Coronaless Six Sixty Generator will prove of interest to the general practitioner, as well as the roentgenologist. It is manufactured by the Acme-International X-Ray Company, who will occupy Spaces 219, 221 and 322, with a display of diagnostic, roentgen-ray apparatus and physiotherapy equipment. The Acme-International Polytherm Generator will be on display.

Two very radical departures in diathermy machine construction will be shown in the exhibit of H. G. Fischer & Co., Inc. These features are embodied in the two new units which will form a part of the display. Late developments in Quartz Lamp Apparatus, Radiant Therapy Lamps, Wave Generators, electrodes and applicators for various electrical modalities will be on display, and visitors are cordially invited to come and ask questions freely of the attendants in charge. Booths 111 and 208.

The Morse Wave Generator will be exhibited by the General X-Ray Company in Spaces 235 and 237. The new GX Genito-Urinary Diathermy Electrodes and the McFee fulgurators will also be on display and their uses explained.

The L-F electric scalpel will be one of the interesting features of the Liebel-Flarsheim Company's exhibit. How this device separates tissues or cartilage without bleeding or oozing from the capillaries will be explained and demonstrated. The Model "U" Dynelectron, which combines the electric scalpel and surgical diathermy modalities and the new mobile Dynelectron will be shown. Booths 229 and 332.

New models of apparatus, including the Biolite, an Infra Red Ray Generator, will be exhibited by the McIntosh Electrical Corporation of Chicago in Booths 231 and 334. Close attention to the newer developments in apparatus, both here and abroad, enables this company to exhibit some new and interesting developments in electro physiotherapy equipment.

The Patterson Cleanable Intensifying Screen and the Patterson Fluoroscopic Screen will be exhibited by the Patterson Screen Company in Booth 225. There will also be shown a new instrument, the Patterson Foreign Body Fluoroscope developed for assisting in the removal of foreign bodies on the fluoroscopic table.

A new Universal Binocular Microscope characterized by a great range of magnification, large flat fields, unequaled stereoscopic effect and entire freedom from eye strain will be exhibited by the Spencer Lens Company. They will also show their Research Microscope de luxe, which has the new combination body and fork-type substage. Booth 126.

A number of new pieces of equipment of interest to the roentgenologist and the physical therapeutist will be shown by the Victor X-Ray Corporation. These are developments of the Research and Engineering Departments and include the Motor-Drive X-Ray Table, Stabilized X-Ray Timer, Vertical Stereo-Radiographic Unit with Automatic Tube Shift, and Rotating Bucky Fluoroscopic Grid. Their showing will be very extensive and will occupy Booths 215, 217, 316, 318 and 320.

A silent motorless X-Ray machine delivering rectified current for either Coolidge or Gas Tubes is one of the new articles that will be displayed by the Wappler Electric Company. They will also show the latest diagnostic instruments, including a new Cystoscope of Dr. Hugh Young. Booths 233 and 336.

BOOKS

Among the Blakiston books will be found a number of monographs of distinct value to the physician who wishes to keep abreast of medical progress. Standard textbooks and manuals will be shown in new editions. A new modern "Practice of Medicine"; an entirely new edition of Greene's "Medical Diagnosis" and other new books on various phases of clinical medicine together with some surprises will make the Blakiston exhibit well worth visiting. Booth 200.

The entire Hoeber line of books including the "Annals of Roentgenology" and the well known "Annals of Medical History" will be on display in Booth 501. The following new publications will be worthy of particular attention: Sach's and Hausman's "Nervous and Mental Disorders from Birth Through Adolescence"; "Henry Ford Hospital Report"; Jackson's "Goiter"; "Transactions of the Charaka Club"; Stewart's "Skull Fractures, Roentgenologically Considered"; Stewart's "Physiotherapy," and the beautiful atlas by Lynch and Felsen on "Tumors of the Colon and Rectum." Some of the earlier publications such as Tilney and Riley's "Form and Functions of the Central Nervous System"; Elsberg's "Tumors of the Spinal Cord"; Pardee's "Clinical Aspects of the Electrocardiogram," etc., will also be shown, and as usual the Hoeber exhibit will include a number of rare medical items.

Outstanding new titles on display in the booth of the J. B. Lippincott Company will be Karsner's "Text-Book of Pathology"; Craig's "Parasitic Protozoa of Man"; Foote's "Diseases of the New-Born"; Henderson's new translation of Meyer and Gottlieb's "Experimental Pharmacology"; Bailey and Cushing's "Classification of the Tumors of the Glioma Group"; the new printing of Spalteholz' "Anatomy"; the Third Edition of Villiger's "Brain and Spinal Cord," and the Third Edition of Dennett's "Simplified Infant Feeding." In addition the regular line of standard medical works will be displayed for the convenience and examination of visitors. Booth 212.

Many out-of-print medical works will be exhibited by Login Brothers in Space 502. These will include Saunders' "Medical Hand Atlases"; Dalton's "Brain," 3 volumes; Parsons' "Eye," 4 volumes; Cushing's "Pituitary Body"; Schliep's "Atlas of Hematology"; MacEwen's "Atlas Head Section"; Osler's First Editions of Works; Baas' "History of Medicine"; Schroeder's "Medicine 1648"; "Archives of Roentgen Ray," first 11 volumes, and a great many other scarce items.

The forthcoming "Atlas of Human Anatomy" by Carl Toldt will be fully explained and described by representatives at the Macmillan Booth 410. Recent Macmillan monographs on nephritis, goiter, arteriosclerosis, manipulative surgery and a very specialized work by Dr. George W. Crile will be displayed.

Nelson's "Loose Leaf Living Medicine," an international work on internal medicine, will be shown by Thomas Nelson & Sons in Space 102. The exhibit will afford the visitor a splended opportunity to inspect the illustrations, charts, tables, microphotographs, roentgenograms, colored plates and other features of this work. Information will also be given out concerning the membership in the Nelson Medical Service Bureau and the new seven-volume "Surgery" now in preparation.

Hugh H. Young's new work on "Urology"; Bickham's six-volume work on "Surgery"; Abt's eight-volume work on "Pediatrics"; the new Mayo Clinic Volume; Cabot's "Facts on the Heart"; the new edition of Moynihan's "Abdominal Operations"; Lilienthal's two-volume work on "Thoracic Surgery"; new edition of Da Costa's "Surgery"; advanced sheets of the new edition of Scudder's "Fractures"; the new edition of the "American Illustrated Medical Dictionary"; new edition of Arny's "Pharmacy"; Boyd's "Surgical Pathology"; Morse's "Biochemistry," and a new edition of Boyd's "Preventive Medicine" are some of the works of particular importance that will appear in the booth of W. B. Saunders Company. Their complete line of books will be shown in Booths 201 and 300.

Specimen copies of about 250 of their current medical publications will form a part of the exhibit of William Wood & Co. Physicians will be welcome to examine these at their leisure and without obligation to purchase. There will be many new books and many new editions of well known standard works. The booth is number 401, directly opposite the Registration Bureau.

FOODS FOR INFANTS AND INVALIDS

Physicians are invited to sample the certified milk produced under auspices of the American Association of Medical Milk Commissions, who will have an exhibit in Booth 242. The value of certified milk to the medical profession will be discussed with all those who are interested.

Dennos, a cereal milk modifier, and Dennos Barium Meal for X-Ray diagnosis will be exhibited by the Dennos Products Company in Booth 527. The Barium Meal is a new product and its advantages will interest all those doing roentgenological work.

An interesting and useful souvenir for their medical friends will be provided by the Dry Milk Company at their exhibit, Booths 326 and 328. Dryco, a special milk for babies, and Protolac, a calcium caseinate will be shown, and their advantages and uses explained.

Some handsome posters of the "Dryco Baby" will also be exhibited. These are printed in colors and visiting physicians can have copies mailed to their homes upon request.

A full assortment of infant diet materials, covering practically every phase useful to the pediatrician and general practitioner will be displayed by Mead Johnson & Co. in Booths 228, 230 and 232. Products to be shown are Mead's Powdered Whole Milk, Mead's Powdered Half Skim Milk, Mead's Recolac, Mead's Lactic Acid Milk, Mead's Casec, Mead's Powdered Protein Milk, Mead's Dextri-Maltose, Mead's Standardized Cod Liver Oil and Mead's Florena. The physician's time will be well spent by a visit to this booth and courteous attendants will answer his questions.

Nutrition is always a subject worthy of serious discussion and there are many details in relation to the use of Mellin's Food which, if thoroughly understood by physicians, would assist them materially in preparing nourishment for babies, children and adults. The Mellin's Food Company will have representatives present in Booths 313 and 315 to make these details clear to all physicians who are interested. A cordial invitation is extended to visit this exhibit.

The merits and uses of Nestle's Milk Food for infants and growing children, invalids and convalescents, and nursing mothers, will be discussed with visiting physicians in an exhibit of the Nestle's Food Company, Booth 203. Lactogen, a modified dried milk, closely approximating breast milk in analysis and digestibility, and Nestle's Malted Milk, will also be exhibited.

A pictorial exhibit of facts about malted milk has been in preparation for six months by the Thompson's Malted Food Company. It will be the main feature of their exhibit. It includes photographs, photo-micrographs and reports from independent laboratories which bring out information about malted milk not hitherto available. A visit to this booth will give the physician some interesting facts about the malted milk industry in general and a first hand acquaintance with Thompson's new product, "Double Malted" Malted Milk. Booth 244.

INSTRUMENTS

A complete assortment of blades and knife handles will be shown by the Bard-Parker Company, Inc., in Booth 124. The visitor will be interested in the Bard-Parker handle, particularly because it has no hidden crevices and thereby facilitates complete sterilization. The fine, steel blades will also be worth close inspection. A cordial invitation is extended to all physicians to come and obtain full information.

The Surgical Profession have been experimenting for years in an effort to perfect an instrument to safely dilate the ureter. C. R. Bard, Inc., who will exhibit in Booth 414 believe they have such a device. Urologists and surgeons will not only be interested in the X-Ray plates showing this instrument in situ but in their exhibit of Catheters and Drains. When one appreciates that three months' time is necessary in the manufacture of Eynard's Gum Catheters, it is readily understood why the profession look to France for the delicate work necessary in the construction of ureteral and other Catheters of precision.

The Baumanometer exhibit will be in Booths 216 and 307. How the lay public has reacted to the series of advertisements on blood pressure published in *Hygeia* by W. A. Baum Company, Inc., will be explained and the results from this effort to emphasize the importance of health examination, the danger of worry and self-treatment and the folly of the patient who makes blood pressure a fad will be discussed with visitors to the exhibit. A new development of importance will be shown for the first time.

The actual manufacture of clinical thermometers and syringes will be carried on by Becton, Dickinson & Co. in their exhibit in Booths 344, 346 and 348. This is planned because the average medical man has little opportunity to become familiar with manufacturing processes and here he may acquire first-hand information. A complete line of Luer Syringes, Yale Needles, Ace Bandages, Asepto Syringes, Sphygmomanometers, Spinal Manometers and other specialties will be displayed.

An innovation on previous methods of drug administration by means of a syringe will be demonstrated by the Cook Laboratories who will exhibit the Cook Carpule System. The visitor will find it very worth while to become acquainted with the Carpule, a cartridge ampule containing the medicament and made to fit a special syringe so that the carpule itself really becomes the barrel of the syringe. Booth 210.

Nose and throat sprays, nebulizers, steam vaporizers, etc., for office and prescription purposes will be displayed by the DeVilbiss Mfg. Company in Booths 513 and 515. Specimens of the complete line will be shown.

A mammoth X-Acto Syringe (1,500 cc. capacity) will be one of the features of the S. Doniger & Co. exhibit. They will show many new and improved features and will also exhibit two new lines of imported surgical forceps and scissors—the X.L. Plated line and the Krome Rustless Surgical Instruments in Booth 145.

Well known specialties such as the Scannell apparatus for transfusion of whole blood, the Taylor Massotherapor and the Dunn Local Anesthesia Outfit will form a part of the exhibit of the MacGregor Instrument Company. It will include a complete line of Vim Firth Stainless Steel Hypodermic Needles and Vim, Emerald, DeLuxe, Luer and Tonsil Syringes. Booth 506.

An extensive collection of instruments and apparatus of their own manufacture as well as many important new items from foreign medical centers will be demonstrated by V. Mueller & Co. in Booths 202 and 204. Among the domestic items are Friend's Liver Forceps, DeLee's Obstetric and Caesarian Section Instruments, Miniature Headlamps, etc. Foreign items are: new Trephining Sets, several new Stomach and Intestinal Clamps, new Bone Banding and Metal Suture Sets, etc.

Many new items will be taken to Dallas by Sharp & Smith for their exhibit in Booths 521 and 523. It will consist of a full and complete line of late, improved models of surgeons' instruments and appliances. Every physician and surgeon is urged to make one or more leisurely visits and examine the articles on display.

OFFICE EQUIPMENT

Two new styles of tables are being brought out by W. D. Allison Company of Indianapolis and will be offered to the profession for the first time in their exhibit, Booths 335 and 337. Physicians are urged to come and inspect this well known line of private office furniture, to ask questions and discuss problems of office furnishing.

The entire line of personal weighing scales, manufactured by the Continental Scale Works, will be displayed in Booth 516. Their Physician's Scale, Stork Scale and Healthometer will show the latest design and construction in these types of scales. There will also be a very interesting exhibit of scale mechanisms.

PHARMACEUTICALS AND BIOLOGICALS

Comparatively recent medicinal chemicals such as Acriflavine, Neutral Acriflavine, Cinchophen, Neocinchophen, Butesin Picrate, Benzyl Fumurate and other drugs will be features of the Abbott Laboratories exhibit. These products have been developed in the Abbott Laboratories and are manufactured by them. In view of the heightened interest in chemical and therapeutic research, this exhibit will be well worth time and study. Booths 317 and 529.

The latest developments in the Dermatological Research Laboratories will be explained by trained attendants in Booth 529. Among the well known D. R. L. products to be presented are Arsphenamine, Neoarsphenamine, Sulpharsphenamine, Metaphen, Potassium Bismuth Tartrate with Butyn, Sodium Thiosulphate.

An interesting feature of the Deshell Laboratories exhibit will be the data on the value and application of "habit time" in the treatment of constipation and the function played by Petrolagar in instigating the normal habit time in the constipated individual. Pertrolagar, an emulsification of mineral oil with agar will be shown in two forms—Petrolagar Plain and Petrolagar with Phenolphthalein. Booths 502 and 504.

A group of men from the staff of the Scientific Department of the Hoffman-La Roche Chemical Works will be in attendance at the exhibit of this firm. Digalen, Pantopon, Thiocol Syrup and other well known "Roche" preparations will be on display. A short talk with any of the attendants will give the visitor quick and accurate information concerning the "Roche" preparations. It is possible that a new and very useful "Roche" development will be announced and exhibited to the profession for the first time at this meeting. Booths 139 and 141.

Comprehensive information in regard to Mercurochrome, as well as data on

other pharmaceutical specialties and diagnostic apparatus of Hynson, Westcott and Dunning will be given out at Booths 209 and 308. Mercurochrome in all the various packages in which it is regularly offered will be displayed.

The feature of the display by the H. A. Metz Laboratories, Inc., will be the assemblage of the latest information relative to the Metz Line of dependable original products. Those in attendance will be glad of the opportunity to discuss the use of these products, technique of preparation and administration, etc. Surgeons will be interested in the specially prepared sterile Novocain Crystals in hermetically sealed ampules for spinal anesthesia and other forms of Novocain-Suprarenin. Salvarsan, Neosalvarsan, Silver-Salvarsan, Sulpharsphenamine, Anesthesin, Novocain, Albargin, Orthoform, Pyramidon and Suprarenin will be among the products exhibited. Booth 311.

The progress that has been made in the manufacture and biological assay of Cod Liver Oil will be emphasized in the exhibit of the E. L. Patch Company, Booths 518 and 520. Why Patch's Flavored Cod Liver Oil is dependable at all times and almost invariably agreeable to the patient will be explained by Patch representatives. They will be glad to tell visitors about new developments in this important field.

All necessary and special apparatus for applying radium tubes, the new type needle, etc., will be included in the exhibit of the Radium Chemical Company. Special attention will be given to demonstrating the use of the new gold implants that are now being supplied for interstitial radiation. Booth 415.

The products to be featured by E. R. Squibb & Sons will include Insulin, Arsenicals, Cod Liver Oil and the Authorized Scarlet Fever Products produced under the patents granted Drs. George F. and Gladys Dick. Representatives of the house of Squibb in attendance at the booth will be pleased to welcome all visitors and will take pleasure in answering questions and explaining merits of the various products. Booths 309 and 408.

The Pollen Exhibit of the Swan-Myers Company is being planned to show the important botanical data of interest to the physician who treats a few, or a large number of hay-fever patients, and should prove a source of helpful suggestions to the doctor in selecting pollen extracts for testing and treating his patients. The forms of extracts that are shown for skin test and therapy are sufficiently varied to conform to individual preference. Booth 103.

SURGICAL DRESSINGS

Cellosilk, which replaces oiled silk, muslin, rubber tissue at a great saving in cost will be exhibited in Booth 206. Its advantages, such as sterilizing qualities, nonadherence, flexibility, toughness and transparency, will be adequately demonstrated by men from the scientific department of the Cellosilk Mfg. Company.

The transparent, nonadherent dressing tissue marketed as Cilkloid by the Cilkloid Company may be examined in Booth 140A. The impervious form will be shown for protective dressings and the perforated form will be featured for direct applications to wound where it does not adhere to the forming granulations. Attendants will be pleased to discuss any problems in connection with the use of Cilkloid.

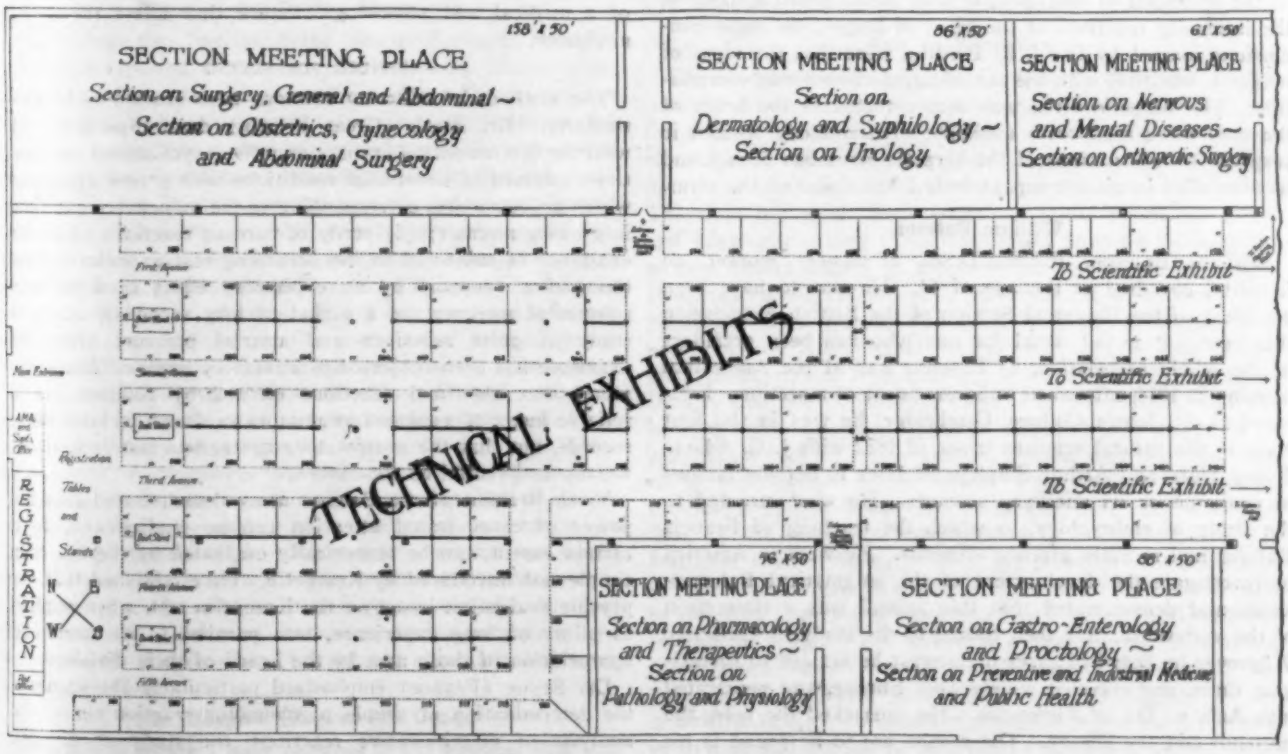
Catgut, Silkworm Gut, Kangaroo Tendon and Cutis will be exhibited along with their regular line of ligatures by the Flanders-Day Company. They will also have on display a large line of Surgeons' Needles and other surgical specialties. A particularly interesting feature of their exhibit will be their Handy Suture Package and their new Cutis ligature. Booth 411.

MISCELLANEOUS

The physicians interested in posture correction and in proper support for maternity cases and relief in enteroptosis, hernia and sarco-iliac strain, will find the exhibit of the Berger Brothers Company interesting and profitable. Various types of Spencer Supporting Corsets and Belts will be on display and their value fully explained. Booth 306.

The El Paso booth will be decorated with models of local, modern sanatoria and hospitals, photographs showing (1) The famous Scenic Driveway over Mount Franklin. (2) El Paso Business Center, with its skyscrapers. (3) The wonderful El Paso Valley along the Rio Grande River, with its beautiful highways. (4) General view of Juarez, Mexico, Calle Comercio, the bull fight ring, race track, the monument of Benito Juarez, the Old Mission Church, the historic Custom House, where Madera delivered his first proclamation at the beginning of the revolution. Booth 514.

The absorbent and hygienic qualities of Wallace's Linen Mesh Underwear will be demonstrated in the exhibit of the Linen Underwear Company, Booth 227. Attendants will explain why these garments are cool and comfortable to wear and will point out the advantages of the peculiar mesh used in the Linen Mesh fabric.



FLOOR PLAN OF EXHIBIT HALL

Foreign Letters

LONDON

(From Our Regular Correspondent)

Feb. 13, 1926.

Cancer and Occupation

There has just been published by the Medical Research Council "An Investigation into the Statistics of Cancer in Different Trades and Professions," by Dr. Matthew Young and Mr. W. T. Russell, with the collaboration of Dr. John Brownlee and Dr. E. L. Collis. The results of the investigation are largely of a negative character. "It must be acknowledged," say the writers, "that, though confirmatory evidence has been obtained of some views already more or less generally accepted as to the close association of some types of cancer with exposure to particular risks incurred in certain forms of employment, e. g., chimney-sweeps' cancer and mule-spinners' cancer, evidence in support of such a connection between the nature of the employment and other forms of cancer, especially those localized internally, cannot be regarded as more than suggestive."

Filter-Passing Viruses

Dr. M. H. Gordon, F.R.S., in the whole-time service of the council, has continued his studies of the viruses of vaccinia and variola reported last year. Advantage was taken of the occurrence of various outbreaks of smallpox in different parts of the country. Comparison by strict serologic methods showed that the viruses from five separate epidemics all gave positive reactions with antivaccinia serum. No difference could be found between virus from the mild type of smallpox sometimes called alastrim (or variola minor) and that from severe examples of this disease (variola major). Since comparable material from six outbreaks of chickenpox and from other control sources gave completely negative results with antivaccinia serum under the same conditions, there is good reason to believe that this serologic method of identifying the presence of variola virus will give valuable aid in future in the diagnosis of smallpox, if it is used. From a study of the immunity reactions of the virus of herpes, the main conclusions formed by Dr. J. R. Perdrau were that the virus of herpes is identical with the causal agent of epidemic encephalitis. The herpetic virus was demonstrated in the brain of the only three fatal cases available. An antibody formed in response to inoculations of the herpetic virus has been found to neutralize in vitro comparatively large doses of the virus.

William Bateson

William Bateson, F.R.S., D.Sc., a pioneer worker on heredity, has died at the age of 64. He was to have been president of the Botanical Section of the British Association this year. It is not usual for one who has been president of the whole association, as Bateson was at the Australian meeting in 1914, afterward to be president of a section. Educated at St. John's College, Cambridge, he was in the first class in the natural sciences tripos of 1882 with J. G. Adami, Henry Head and Arthur Shipley, all later to become famous in medicine or its ancillary sciences. He was attracted to the study of embryology, to which the teaching of Francis Balfour had recently given a stimulus. He went to America to investigate the development of the enigmatical Balanoglosus, and demonstrated that this animal was a connection of the vertebrata. He then turned to the study of variation. Wherever he heard of cases of interest he set out to investigate them, and traveled widely over Europe, and penetrated into Asia as far as Turkestan. He ransacked the field, the museum and the library. The results are to be found in his great work "Materials for the Study of Variation," published in 1894. The idea of discontinuity in variation was Bateson's great contribution in this book. Nature proceeds by jumps. To the followers of Darwin this view was abhorrent, for his conception was of living things evolving through a continuous series of minute changes. Bateson next attacked the problem of heredity by the method of direct experiment, so that when Mendel's paper was unearthed in 1900 he was in a position to appreciate its deep significance. Indeed, it may be said that, had that discovery been delayed a few years, the world would now be speaking of Bateson's law instead of Mendel's. Mendelism was first viewed with skepticism by biologists. But Bateson at once recognized its value and threw himself into the task of vindicating and extending it. In his garden at Grantschester and in the Botanic Garden at Cambridge he gathered round him an enthusiastic little band of younger workers. His garden became the world center for genetic work and thought, attracting visitors from all over the world. In 1908 appeared his classical "Principles of Heredity," and he was elected to the chair of biology of Cambridge, which had been established in recognition of his services to science. He did not, however, retain it long, for in 1910 he became director of the newly founded John Innes Horticultural Institution at Merton, in Surrey. Here, with resources more ample than Cambridge could provide, he was able to exercise to the full his great gift of inspiring younger workers. Before his work was cut short he had made the institution the best of its kind in the world. He pointed out the weakness of the methods of morphology in attempting to solve the great problem of evolution, and insisted that the more fruitful way lay in the study of variation, and he made the biologist study heredity by the method of experiment.

BELGIUM

(From Our Regular Correspondent)

Feb. 3, 1926.

Congress on Aerial Navigation

The third International Congress on Aerial Navigation was held recently in Brussels. The medical section of the congress, which was presided over by Colonel Demolder of the Belgian Army Medical Corps, discussed a series of problems of a medical and physiologic nature that affect the aerial navigator.

APTITUDE FOR FLYING

The methods of selecting aviators were studied more particularly. Dr. Black (Great Britain) dealt especially (1) with the determination of discriminative psychomotor reaction times effected under special conditions with a new apparatus which provokes acts corresponding to the maneuvers executed in guiding aircraft; (2) study of cardiac reactions when the examinee is subjected to the breathing test as described by the author (support by an expiratory effort of a 40 mm. column of mercury for a period of fifty seconds), and (3) study of pulse reactions and arterial pressure after the examinee has been subjected to a rotatory motion. Black has found that abnormal reactions elicited by rotation are a reliable index of weakness in aviators as shown by later flight records, but that the postrotatory nystagmus test is untrustworthy and should be abandoned.

V. G. Brabant of the Belgian army demonstrated that the power of concentrated attention can be studied and, to a certain extent, can be numerically evaluated by the use of a simple test introduced by Kraepelin. He established that the psychic evaluation based on the Kraepelin test, when applied to pilots of long experience, was parallel to the technical appreciation of those men by the heads of their divisions.

Dr. Beyne (France) emphasized particularly the value of the determination of simple psychomotor reaction times, the analysis of discriminative reactions, the study of diffused attention and the evaluation of dynamic effort.

At the close of the discussions, the congress endorsed the view that only the results of the tests as a whole, and not the separate tests, could be regarded as representative of the psychic complex of examinees; that the results of the psychophysiologic tests should agree with and confirm the clinical findings in order to serve as a basis for a medical opinion, the intervention of which is indispensable and cannot be replaced by any sort of numerical criteria.

THE RÔLE OF THE PHYSICIAN IN AERONAUTICS

Dr. Heald of London dealt with the part played by the physician in aeronautics, considering not only his influence on the selection of the flying personnel but also on all that has to do with the analysis of the professional work of the aviator and the hygienic direction of his mode of living. Certain points must be considered from the epidemiologic point of view, for aerial navigation has made rapid contacts between groups of humans formerly isolated.

MILITARY AVIATION

Dr. Sand of Brussels pointed out the services rendered by aviation, even at the present time, in transportation of the wounded or of surgical supplies, and also in the interest of emergency treatment and in the combating of epidemics. This is particularly true of Sweden, where, after heavy snows, the interruption of communication (telephone lines) isolates large areas, and the aid brought by aviators has been of signal service.

RESOLUTIONS PASSED BY THE CONGRESS

The following resolutions were passed by the congress: 1. The neutralization of sanitary aircraft should be recognized. 2. Standardization of the personnel and the character and location of the equipment on board aircraft should be effected. 3. The attention of pilots should be called to the opportunity of controlling the findings of their senses by the indications of instruments on board. 4. The builders of airplanes should provide protection for the heads of aviators against injuries caused by the sides of the pit and by equipment. This protection is especially necessary in forced landings.

Myomectomy During Pregnancy

Addressing the Société belge de gynécologie recently, Schockaert reported two cases of myomectomy during pregnancy. In one case the inner surface of the fibroma was so near to the uterine cavity that it was opened during the operation, permitting a view of the embryo. The uterus was closed. In the second case, a sessile subserous fibroma causing intense pain owing to pressure on the omentum required operation. These indispensable surgical procedures did not, however, affect in any way the evolution of pregnancy, nor did they interfere with the mechanism of delivery. In connection with these cases, several authors discussed the influence of surgical interventions on the evolution of pregnancy. It was generally admitted that an operation on the adnexa during pregnancy will bring about abortion. Delporte reported a case in which he operated on a woman for rupture of extrauterine pregnancy three months advanced. The conditions necessitated a cuneiform incision in the uterine muscle. Observing, during the course of the operation, that a uterine pregnancy was concomitant with the tubal pregnancy, he informed the family of the patient that a miscarriage would occur in three or four days. The pregnancy, however, continued to term. In spite of these happy results, Dr. Rouffart emphasized the dangers of operations during pregnancy. At such time all interventions that are not absolutely necessary must be avoided.

The Hospital Ship on the Congo

In previous letters I have referred to the hospital ship that is to be put into service on the Congo River. The *Bruxelles médical* has published the details of the organization of the proposed service, from which I take the following items: The service will consist of a motor boat and two barges. The motor boat, of steel hull construction, will be 37 meters long, 7.3 meters broad, and will have, in passing through the water, a draft of only from 50 to 60 cc. It will be provided with three bridges. It will have ice machines, disinfection equipment, waiting rooms, operating rooms, laboratories, cabins and bathrooms. It will have a wireless outfit, which will give it constant connection with the hospitals and with the numerous stations along the river and in the interior. The motors will be able to use petroleum or palm oil. As for the barges, they also will be of steel hull construction and will constitute independent units, being each provided with a wireless outfit, an ice machine and dispensary supplies. They will be 30 meters long, 7 meters broad, and will have a shallow draft. They will be provided with two bridges, nurses' quarters, wards for patients, laboratories, bathrooms, and (in the prow) a ward enclosed with mosquito netting, for convalescents.

GENEVA

(From Our Regular Correspondent)

Feb. 20, 1926.

Preoperative Treatment

Chevrier's method of preparing patients for surgical operation has been followed here with good results. The evening before the operation, an enema is given. A good amount of sugared milk and sweet preserves is given, and at 9 p. m. a large glass of some very sweet drink is ingested and another in the morning a few hours before operation. After operation a 48:1,000 solution of glucose is given by the rectal drip method. This procedure, which loads the liver with glycogen, also tends to increase the bulk of blood, facilitating renal excretion and helping to prevent decrease of the blood pressure.

The results are reduced vomiting and less depression after the anesthesia, and lessened or absent postanesthetic cholemia. A slight rise of temperature may be provoked by excessive combustion of glycogen.

Sale of Narcotics

The Medical Society of the Canton of Vaud has issued instructions to its members relating to the federal law for the control of the sale of narcotic drugs, which went into effect, Jan. 1, 1925. The law requires pharmacists to produce documentary evidence of authority for the sale of narcotics. Therefore physicians must write out prescriptions for them, and telephonic orders from institutions must be followed by written orders signed by the physicians ordering the drugs. If a prescription containing a narcotic is to be repeated, the physician must specify this in writing or furnish a new prescription. The original prescription must be kept by the pharmacist, unless it contains a written order to repeat it. In that case the prescription is kept by the patient until the last repetition has been fulfilled. A pharmacist may give to a patient a copy of a prescription, but the copy does not rank as a prescription to be filled. Prescriptions of foreign physicians can be filled only once, and then only when the dose of the narcotics contained in it is not abusive. A foreigner usually wants to keep his prescription (given him by his home physician), and a pharmacist may allow him to retain it after the prescription has been stamped with the pharmacist's seal. This prevents a prescription from being filled again elsewhere. If it is necessary to refill the prescription, a Swiss practitioner must be applied to for a written order. Proprietary remedies must be prescribed in writing and are not to be repeated without a written order from the physician.

Surgical Society of Switzerland

The next annual meeting of the Surgical Society of Switzerland will take place at Berne, June 12 and 13. Dr. Albert J. Ochsner of Chicago was to have opened the meeting with a report on goiter, but on account of his death his place will be taken by Dr. Feurer of St. Gall. The other topics for discussion are as follows: Drs. Jentzer and Odermatt will speak on "The Causes of Irritation Arising from Iodine-Alcohol Solutions in the Operating Room." Dr. R. Kummer of Geneva and Drs. Ruppaner and Schweizer of Zurich, will take up the subject of Acute Pancreatitis.

Advertising of Pharmaceutic Preparations

In both Switzerland and France, a campaign is being waged against suggestive and agressive advertising of pharmaceutic specialties. Special attention should be given to an article on the subject by Dr. Igert in the *Journal de psychologie normale et pathologique,* Dec. 15, 1925, and another by Dr. Perrigny in *Le progrès médical,* Feb. 6, 1926. Ingert remarks that an advertisement acts directly on our senses or, more subtly, by mixing some foreign but interesting matter with the subject. As Dr. Perrigny points out, if advertising becomes too aggressive it will not attain its aim. Intensification of advertising has become necessary on account of the increasing number of proprietary preparations, many of them worthless. Some of these preparations are excellent in preparation and in quality of drugs employed. One cannot remember, however, the names and formulas of all of them. The profession would welcome a list of pharmaceutic preparations giving formulas, prices, etc. The medical profession here maintains that the place for pharmaceutic advertising is in recognized medical journals.

Reproduction of Incunabula

Miss E. Droz has recently undertaken the very laudable work of reproducing fifteenth century incunabula, the editions being limited to 500. Those pertaining to medicine that have appeared are: "La clef des songes," a valuable historical tract, and "Remedies Against the Plague," compiled by E. Droz and Dr. A. Klebs. Other fifteenth century medical incunabula are in press.

BERLIN

(From Our Regular Correspondent)

Jan. 30, 1926.

Suicide in Germany Since the War

An epidemic of suicide occurred in the closing weeks of last year. It is instructive to note the relations that statistics have shown to exist between suicide and the prevailing economic situation. In a recent number of the *Klinische Wochenschrift,* Dr. Karl Freudenberg devotes a long article to the problem. Suicide was reduced during the war, but the reduction affected only males. Comparison of suicide statistics for the periods 1911-1913 and 1920-1922 shows that the frequency of suicide among children, which has always been about five times as common among boys as among girls, was not affected by the postwar period. In the age-groups up to age 25, in which the decision to commit suicide is usually of erotic origin, no changes are noted. The marked reduction in the middle age-groups is, however, especially striking, and the assumption has been advanced that natures with manic proclivities, who ordinarily make up a large proportion of the suicides, felt more comfortable during the excitement due to the war than they did under more settled conditions. The increase in suicide in the age-groups of women over 60 and of men above 70 is ascribable to the effects of inflation of the currency. The increase of suicide in women of the 20-30 age-group is doubtless due to the greater risks that young women run during troubled times. Near the peak of the inflation period around 1922, the number of suicides among women above 70 years of age increased by 13 per cent, while the increase among men of the corresponding age was only 7 per cent. The conclusion seems reasonable that women of advanced age are less able to cope with bad economic conditions than are men of corresponding age. The year 1924, owing to the stabilization of the currency, shows a decrease in the number of suicides among the older age-groups, especially among the women.

On the other hand, religion constitutes the most potent deterrent to suicide. The statistics of Prussia for 1911-1913 show that, among men of Protestant, Jewish and Roman Catholic faiths the proportion of suicide per 10,000 was, respectively, 4.10, 4.61 and 1.81; among the women, 1.37, 2.07 and 0.50. The fact that suicide is less frequent in rural than in urban districts may be because country people can procure food more easily than can city dwellers. Since the war, suicide among women has increased at about the same rate irrespective of religion, and more rapidly than among the men.

Occupational or professional suicide statistics are available only for physicians. During the period 1920-1923, there were five cases of suicide per 10,000 among physicians of the 26-46 age-group, and seventeen per 10,000 in the 46-61 age-group. The first figure is almost twice as high as among the corresponding group of the general population; the second is more than three times as high. Elderly physicians suffered severely under the inflation of the currency.

From the standpoint of social position, the highest incidence of suicide is found among the lower middle class. The influence of economic conditions on suicide must not be overestimated; for example, in Berlin the suicide rate has not increased materially in the last hundred years. As for the method resorted to by suicides, death by poisonous gases has become more common since the war. The percentage of men employing that method has increased from 2 to 7.9, while the percentage of women has risen from 7 to 22. In general, hanging, shooting and drowning have been the methods usually employed.

Infant Mortality in Prussia

According to the Prussian bureau of statistics, the infant mortality in the second quarter of 1925 (9.7 per hundred living births) was lower than for the corresponding quarter of 1924 (10.4 per cent). A decrease was noted in all provinces except Brandenburg, in which there was an increase of 0.8, and in Hohenzollern, where the increase was even greater. In East Prussia, Berlin, Lower Silesia, Upper Silesia, Saxony and Schleswig-Holstein there was a decrease of more than 1 per cent. The highest rate was recorded in Upper Silesia (14.4 per cent), and the lowest in Hesse-Nassau (6.9 per cent). For comparison, in the second quarter of 1913 the infant mortality averaged around 14 per cent; only Hesse-Nassau had a rate of 10 per cent, while the highest rate (20.6 per cent) was recorded in Lower Silesia; several provinces had rates above 17 per cent.

Standardization of Smallpox Vaccine Material

In order that smallpox vaccination throughout the world may be placed on a common basis, an endeavor is being made to standardize vaccine materials. At a recent session of the smallpox commission of the League of Nations in the Hague, as stated in the *Deutsche medizinische Wochenschrift,* it was decided to institute experiments to determine the best form of standardization. For this purpose a subcommission was appointed, which is to complete its work as soon as possible, keeping in touch with the laboratories represented. The results obtained will then be compared and a solution will be proposed.

Marriages

JOSEPH E. BEIDEMAN, Norristown, Pa., to Miss Rebecca Norris Balmer of Valley Forge, recently.

IRA FULTON JONES to Miss Mary Virginia Norris, both of Fort Smith, Ark., February 12.

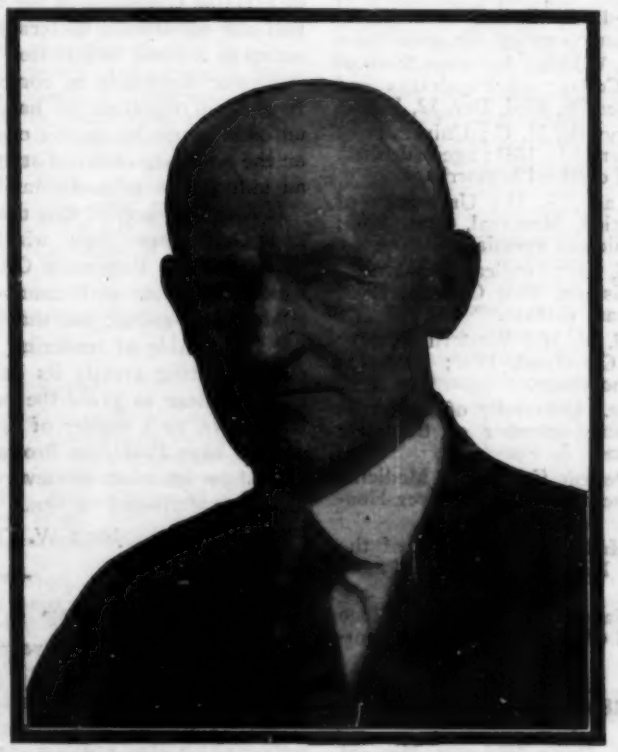
LEROY CHAPIN, to Mrs. Jean Harris, both of Canton, Ill., January 22.

Deaths

Thomas S. McDavitt ✙ trustee of the American Medical Association continuously since 1913, died in St. Paul, March 3. He had suffered for several years with myocarditis.

Dr. McDavitt was born in St. Louis on May 15, 1857; his father was Dr. Virgil McDavitt, a practitioner of that city. After graduation from the Chicago Medical College in 1879, Dr. McDavitt began practice in Minneiska, Minn., in 1879; he practiced in Winona, Minn., from 1880 to 1890, and finally took up practice at St. Paul in 1891, specializing in ophthalmology and otolaryngology. He entered early into the activities of organized medicine, serving as secretary of the Minnesota State Medical Association from 1900 to 1918. Dr. McDavitt also represented Minnesota in the House of Delegates of the American Medical Association, 1906, 1907, 1909 and 1913. At each of these meetings he served also on one of the reference committees of the house. His perspicacity was recognized by his election to the Board of Trustees in 1913 and by his reelection at the expiration of each term since that time.

Since 1912 Dr. McDavitt has been secretary of the Minnesota State Board of Medical Examiners. His interest in medical education was keen; he aided the battle for higher standards and opposed vigorously any attempts of the unqualified to impose on the public.



THOMAS S. MCDAVITT, M.D., 1857-1926

To Dr. McDavitt the interests of the American Medical Association were paramount; in the consideration of any problem he thought always of the greatest good for the greatest number, and, having made his decision, acted with incisiveness and determination. His calmness and conservatism made him a tower of strength in guiding the activities of the Association.

Henry Rust Stedman ✙ Boston; Medical School of Harvard University, Boston, 1875; member and past president of the Boston Society of Psychiatry and Neurology and the New England Society of Psychiatry; member of the American Neurological Association, the New York Psychiatrical Society and the American Psychiatric Association; assistant physician and acting superintendent of the Danvers (Mass.) State Hospital, 1879-1884; founder, superintendent and on the staff of the Bournewood Hospital, Brookline, 1884-1918; chairman of a commission appointed by the Governor in 1909 to revise and codify the laws of Massachusetts relating to the insane; formerly a contributor to medical journals; aged 76; died, in February, at his home in Brookline, following a long illness.

William Edward Schroeder ✙ Chief of staff and attending surgeon in the Wesley Memorial Hospital, Chicago, died in St. Petersburg, Fla., March 5, aged 59. Dr. Schroeder received his preliminary education in the University of Illinois and his degree in medicine from the Chicago Medical College in 1891. He at once took up the practice of surgery, and was at various times associated with Cook County, Provident and People's hospitals and as consulting surgeon of the Illinois Central Railroad, and from 1906 to 1914 was professor of surgery at Northwestern University Medical School. He was for many years recognized as a surgeon of great technical skill.

Nils E. Remmen ✙ Chicago; University of Illinois College of Medicine, Chicago, 1887; member of the American Academy of Ophthalmology and Oto-Laryngology, and the Chicago Ophthalmological Society; formerly on the staffs of the Lutheran Deaconess, Norwegian-American, and Lutheran Memorial hospitals and the Illinois Charitable Eye and Ear Infirmary; aged 62; died, February 28, at Fair Hope, Ala., of leukemia.

Thomas Rickett Pooley, Newton, N. J.; Bellevue Hospital Medical College, New York, 1864; formerly professor of ophthalmology, Starling Medical College, Columbus and New York Polyclinic Medical School and Hospital; Civil War veteran; on the staff of the New Amsterdam Eye and Ear Hospital, New York, 1888-1910; aged 84; died, February 14, of chronic interstitial nephritis and uremia.

John Hammond Blodgett ✙ Boston; Medical School of Harvard University, Boston, 1897; member of the New England Otological and Laryngological Society; for many years on the staffs of the Massachusetts Eye and Ear Infirmary and the Boston City hospitals; aged 53; died, February 18.

Willis Baker Gifford, Attica, N. Y.; University of Buffalo Department of Medicine, 1876; member of the Medical Society of the State of New York; past president of the Wyoming County Medical Society; aged 75; died, February 13, near St. Petersburg, Fla., of angina pectoris.

John Cheston King ✙ Atlanta, Ga.; Atlanta Medical College, 1895; member of the American Psychiatric Association; part owner and medical director of the Cheston King Sanitarium, Stone Mountain; aged 60; died, February 7, at the Wesley Memorial Hospital, of nephritis, uremia and chronic myocarditis.

Alfred H. Read, Norristown, Pa.; Jefferson Medical College of Philadelphia, 1897; member of the Medical Society of the State of Pennsylvania; for twenty years president of the board of health; aged 64; died suddenly, February 11, of heart disease.

Eugene Yates Johnson, Louisville, Ky.; Kentucky University Medical Department, Louisville, 1900; formerly a pharmacist; at one time on the faculty of the University of Louisville School of Medicine; aged 64; died, February 19, of pneumonia.

Franklin Morris Class, New York; Columbia University College of Physicians and Surgeons, New York, 1907; member of the Medical Society of the State of New York; aged 44; died, February 12, at the Presbyterian Hospital, of bronchopneumonia.

William Henry Devine ✙ Milton, Mass.; Medical School of Harvard University, Boston, 1883; Spanish-American War veteran; formerly on the staffs of the Carney and Deer Island hospital, Boston; aged 65; died, February 5, of pernicious anemia.

John Benjamin Hancock ✙ Newtonia, Mo.; Missouri Medical College, St. Louis, 1885; past president of the Newton County Medical Society; formerly member of the state legislature; aged 61; died, February 14, of uremia.

James Thompson Schell ✙ Philadelphia; Medico-Chirurgical College of Philadelphia, 1895; member of the

Obstetrical Society of Philadelphia; aged 53; died, February 22, of influenza.

John Hodges Drake, Sr., Auburn, Ala.; Atlanta Medical College, 1867; member of the Medical Association of the State of Alabama; aged 80; died suddenly, February 5, of heart disease.

James W. McCoy, West Liberty, W. Va.; Medical College of Ohio, Cincinnati, 1875; aged 87; died, February 14, as a result of a cerebral hemorrhage which occurred three years ago.

Willis O. Phillips, Centerburg, Ohio; Cleveland University of Medicine and Surgery, 1883; member of the Ohio State Medical Association; aged 70; died, February 5, of angina pectoris.

James Sherman Swartzwelder, Mercersburg, Pa.; Baltimore Medical College, 1890; Jefferson Medical College of Philadelphia, 1892; aged 60; died suddenly, February 4, of heart disease.

Llewellyn C. Merrill, Chicago; Bennett Medical College, Chicago, 1914; formerly superintendent of the Illinois General Hospital; aged 55; died, February 27, of chronic myocarditis.

Judson Eugene Strong, Cairo, Ill.; Cleveland University of Medicine and Surgery, 1880; aged 70; died, February 9, at St. Mary's Infirmary, following an operation for gallstones.

John Bowen Smith, Clarksburg, W. Va.; Jefferson Medical College of Philadelphia, 1873; College of Physicians and Surgeons, Keokuk, Iowa, 1877; aged 78; died, Dec. 12, 1925.

Benjamin Franklin Falls, Cherryville, N. C.; University of Tennessee College of Medicine, Memphis, 1881; aged 70; died, February 3, at Kings Mountain, of cerebral hemorrhage.

William Henry Still, White Lake, S. D.; University of Bishop College Faculty of Medicine, Montreal, Que., 1902; aged 59; died, February 2, of pernicious anemia.

Clarence Gabriel Perot, Campti, La.; Medical Department of the Tulane University of Louisiana, New Orleans, 1906; aged 43; died, February 8, of heart disease.

Lysander W. Black ✠ Carlsbad, N. M.; Western Reserve University School of Medicine, Cleveland, 1890; aged 71; died, February 9, of cerebral hemorrhage.

Thomas G. Turner, Dunmor, Ky.; University of Louisville School of Medicine, 1889; formerly member of the state legislature; aged 70; died, February 5.

Channing H. Stiles, Detroit; Detroit College of Medicine and Surgery, 1906; formerly on the staff of the Harper Hospital; aged 48; died, February 5.

Webster Smith, Colfax, La.; Medical Department of the Tulane University of Louisiana, New Orleans, 1884; aged 65; died suddenly, Nov. 24, 1925.

Ernest L. Alexander, Omaha; Hahnemann Medical College and Hospital, Chicago, 1882; aged 67; died recently, of complications, following influenza.

William A. Pease, Koshkonong, Mo.; Hahnemann Medical College and Hospital, Chicago, 1886; aged 67; died, February 12, of heart disease.

Charles Reginal Ray, Medford, Ore.; Missouri Medical College, St. Louis, 1884; aged 67; died, January 26, near Los Angeles, of pneumonia.

Hiram S. Short, Fillmore, Ill.; Eclectic Medical Institute, Cincinnati, 1873; aged 85; died, February 8, at Nokomis, of cerebral hemorrhage.

Georgina A. Grothan, Winnetka, Ill.; Northwestern University Woman's Medical School, Chicago, 1893; died, February 12.

Frederick Clark Bailey ✠ Redfield, S. D.; University of Michigan Medical School, Ann Arbor, 1883; aged 67; died, February 10.

Edward T. Smith, Buffalo; Medical Department of the University of the City of New York, 1881; aged 67; died, February 2.

James F. Roper, Union City, Tenn.; University of Tennessee College of Medicine, Memphis, 1893; aged 62; died, January 29.

William B. Sabin ✠ Watervliet, N. Y.; Albany Medical College, 1882; aged 63; died, January 28, of cerebral hemorrhage.

Fred Sherman, Coldwater, Mich.; Indiana Eclectic Medical College, 1889; aged 72; died, February 7, of heart disease.

George W. Howard, Alvin, Ill.; Hospital College of Medicine, Louisville, Ky., 1876; aged 77; died, February 8.

Edward B. Wallace, Atlanta, Ga.; Meharry Medical College, Nashville, Tenn., 1907; died, Nov. 25, 1925.

Correspondence

"INTRAVENOUS USE OF DYES"

To the Editor:—In my article on this subject (The Journal, Dec. 12, 1925), the following statement is made: "It is unfortunately rather widely believed without, I think, any proof, that acriflavine injected into the blood stream leaves an impression on the serum which has been rendered, through contact with the dye, highly bactericidal. This belief is based on an experiment made by Browning, whose work is not to be lightly criticized, but the conclusion that he draws was, I am convinced, a curious case of misinterpretation."

I have just received from Professor Browning a letter in which he states that he had no intention of implying that the bactericidal properties observed after injection of diaminoacridine sulphate were due to anything else than the presence of acridine compound in the blood and no idea of suggesting that any mysterious bactericidal power was conferred on the serum as a result of injection of the dye. It is important that Professor Browning be correctly represented in this matter. It is also important to have it made clear that a wholly unsound chemotherapeutic conception, which appeared to rest on the authority of this distinguished investigator, arose from an unfortunate misunderstanding of his statements.

It is to be regretted that the title of the article of Browning and Gulbransen from which this misapprehension arose ("Bactericidal Properties Conferred on the Blood by Intravenous Injections of Diamino-Acridine Sulphate") is perhaps slightly ambiguous; and that the author's statement that this dye "is capable of rendering the blood serum antiseptic and of augmenting greatly its bactericidal power" was not sufficiently clear to avoid the possibility of the false inference which has, as a matter of fact, been actually drawn. I am glad to have Professor Browning's authority for stating that he had no intention whatever of advancing any such idea as has been attributed to him.

John W. Churchman, M.D., New York.

CENTENARY OF DEATH OF LAËNNEC

To the Editor:—This year commemorates the hundredth anniversary of the death of a great physician, René Théophile Hyacinthe Laënnec, the discoverer of the stethoscope.

Laënnec has gained immortality because he opened a field for exploration and also for the reason that he laid the foundation stone of modern knowledge of diseases of the chest and their diagnosis by mediate auscultation, and not solely because he was the inventor of the stethoscope, although it is the first instrument in the hands of the medical tyro, and the constant companion of the physician throughout his medical career.

The glory of Laënnec is consecrated: it is inexhaustible. Time, the supreme judge, awing in its cold impartiality, increases each and every day the reputation of the one who has given to us auscultation: every physician the world over who auscultates the chest of a living being becomes by that very fact his disciple.

This great man died of phthisis, Aug. 13, 1826, at the age of 46.

I think that it is befitting that the American Medical Association, in some way or other, pay homage to the memory of the father of modern internal medicine, and that the Section on Practice of Medicine at the next annual session dedicate at least one of its papers to the discussion of the influence of his discoveries in the establishment of modern medicine, especially diseases of the chest, on its present basis of scientific achievement.

A. E. Fossier, M.D., New Orleans.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

CALCIUM LACTATE TO HASTEN BLOOD COAGULATION

To the Editor:—Is there any reason for the discontinuance of 10 grains of calcium lactate every two hours for three days, on account of the lessening of the clotting of the blood?

JOSEPH HALTON, M.D., Sarasota, Fla.

ANSWER.—This subject is still in a debatable and debated condition. While there can be no question that the intravenous injection of calcium salts accelerates the clotting of blood, most especially in certain conditions of delayed clotting, there is considerable doubt whether enough calcium is absorbed on peroral administration of calcium salts to affect appreciably the calcium content of the blood and its clotting time. The bare facts are that, while in some cases calcium salts seemed to be used successfully, it is admitted that the results are inconstant and temporary; that, indeed, the calcium may act inversely and increase the clotting time. This, the sponsors of calcium therapy assert, is liable to occur if the administration is continued for more than three days, and that hypercalcemia may lead to delayed clotting just as does hypocalcemia. Unfortunately for the establishment of this alibi, when calcium therapy fails, no one has as yet actually demonstrated a hypercalcemia after giving calcium salts by mouth in any quantity and for any length of time. Still, if one employs this treatment because of its harmlessness, one might as well follow the directions of those most familiar with it and give it for only three days at a time, as this cessation of the administration certainly will not harm the patient either.

INCREASING HEIGHT

To the Editor:—I wish to ask your advice in regard to a child of short parents. The father is about 5 feet and the mother about 4½ feet. They have a child 13 months old that looks short. I remember that Dr. Murphy taught that the thyroid controls the length of the long bones. Would I be justified in giving thyroid or other endocrine substances to this child to promote growth of the long bones?

C. D. STRATTON, M.D., Rothville, Mo.

ANSWER.—Routine glandular therapy, various gland products being used alternately, has been alleged to have some beneficial effect, but there are few authentic reports. The pituitary is said to have value and also the pineal and suprarenal glands. Small doses of thyroid have been urged as enhancing the value of the other glands. The subject has been discussed by Engelbach and McMahon (Osseous Development in Endocrine Disorders, *J. Radiol.*) and also by Lewin and Jenkinson (*Am. J. Roentgenol.*, February, 1924). It must be remembered, however, that such use of glandular therapy is quite experimental and may be futile.

SENSITIZATION TO FOOD PROTEINS

To the Editor:—I would appreciate information regarding the desensitization of persons sensitized to food proteins. I have a 4 months old infant that is sensitized to milk proteins and shows a marked eczema. What dose of the offending protein extract should be administered, how often, and how much increased with each injection?

CHARLES B. ZIPF, M.D., Freeport, Ill.

ANSWER.—Desensitization in a 4 months old infant is not advisable; it seems best to wait with any procedure of this nature until the child is 2 years old. In the meantime, goat's milk may be secured for the feeding of the child. Later on, dilutions of cow's milk should be made, and the initial dose given by mouth should be at least one one-thousandth of the concentration that still yields a skin reaction. This is then gradually increased.

The procedure might be adopted which is recounted by Bret Ratner (Eczema in Infancy Due to Protein Sensitization, *M. Clin. N. America* **9**:817 [Nov.] 1925). In his case, the infant of 4½ months was found sensitive to milk, and the mother was recommended to boil all milk used in her own diet. The eczema in the infant cleared up. At the age of 6½ months, one drop of raw milk was given in a teaspoonful of warm water daily just before one of the breast feedings. The amount of raw milk was increased slightly over a long period. Other dietary difficulties were overcome, and the final result was good.

TRUSS FOR HYDROCELE

To the Editor:—Please advise me if a truss being used to cure a congenital hydrocele should be worn day and night, or just during the time when the patient is out of bed. Patient is a boy three years old. Please omit name.

M.D., Wis.

ANSWER.—If a truss is used for treating a congenital hydrocele, it must be worn day and night, because in this way only obliteration of the sac may be accomplished.

Book Notices

HANDBUCH DER NORMALEN UND PATHOLOGISCHEN PHYSIOLOGIE. Mit Berücksichtigung der experimentellen Pharmakologie. Herausgegeben von A. Bethe, G. v. Bergmann, G. Embden und A. Ellinger. Zweiter band. Atmung. Aufnahme und Abgabe gasförmiger Stoffe. Bearbeitet von K. Amersbach, G. Bayer, A. Bethe, A. Brunner, W. Felix, F. Flury, A. Geigel, W. Heubner, L. Hofbauer, G. Liljestrand, O. Renner, F. Rohrer, F. Sauerbruch, E. v. Skramlik, R. Staehelin. Paper. Price, 39 marks. Pp. 552, with 122 illustrations. Berlin: Julius Springer, 1925.

In this first volume of the series to appear as volume II (respiration), the editors explain why they were induced by the publisher to attempt this large task. Sixteen years have elapsed since the appearance of the last volume of Nagel's Handbuch der Physiologie, which dealt primarily with physiologic material. As the general title of the present endeavor indicates, the entire field of normal and pathologic physiology will be covered, including the pharmacology of the tissues or organs under discussion. The topics to be covered by the different volumes of this comprehensive handbook are: I, general physiology; II, respiration; III, digestion and the digestive apparatus; IV, resorption and excretion; V, metabolism and energy changes; VI, blood and lymph; VII, circulation of the blood; VIII, special organs and arrangements for changes of energy; IX, the central nervous system; X, special physiology of the centers of vertebrates; XI, receptors; XII, photoreceptors; XIII, organs of defense and offense; XIV, reproduction; the last three volumes, XV, XVI and XVII, deal with correlations: physiology and pathology of the organs supplying hormones, movement and equilibrium, orientation, heat regulation, water metabolism, sleep, senescence, constitution and heredity. No attempt has been made to indicate the multiplicity of subtitles in the various volumes or the great number of (essentially German) contributors. It is, of course, impossible to offer any sort of concise and critical review of the present volume. Fifteen recognized authorities discuss all known aspects of the subject: general and comparative anatomy, organs of respiration, physiology of the respiratory movements, physiology of the respiratory passages, respiratory sounds, pathophysiology of the respiratory passages, chemistry of the gaseous exchange, regulation of respiration, pathologic physiology of respiration, operative diminution of the lung, pharmacology of respiration, permeability of the lung for foreign substances, inhalation of dust, gas poisoning, and respiration in plants. A. Bethe, Flury, Heubner, Liljestrand and F. Sauerbruch are among the contributors to the various sections of the volume.

POST-MORTEM APPEARANCES. By Joan M. Ross, M.B., B.S., M.R.C.S., Assistant Pathologist to St. Mary's Hospital. Preface by E. H. Kettle, M.D., Professor of Pathology and Bacteriology, Welsh National School of Medicine, Cardiff. Cloth. Price, $2.50. Pp. 216. New York: Oxford University Press, 1925.

Dr. Ross describes the chief pathologic changes to be looked for in the bodies of persons dying from the common diseases and from poisoning. The accounts are necessarily brief, including only the typical changes and the gross appearances of the organs; but the essential facts are given in a clear manner. The book should be of value in the postmortem room, especially to one making occasional examinations, as the technic of performing the examination is described, as well as the lesions likely to be present in typical cases. There are tables of normal weights and measurements and a table of ossification of the bones useful for quick reference.

BACTERIA IN RELATION TO SOIL FERTILITY. By Joseph E. Greaves, M.S., Ph.D., Professor of Bacteriology and Physiological Chemistry, Utah Agricultural College, and Ethelyn O. Greaves, M.S. Cloth. Price, $2.50. Pp. 239, with 45 illustrations. New York: D. Van Nostrand Company, 1925.

Here is a successful attempt to explain, in simple language, the relation of bacteria to soil fertility. After a general discussion of the structure and the biochemical activities of bacteria, the following subjects are discussed briefly but amply for the general reader: soil formation, structure and composition; the nitrogen, sulphur and phosphorus cycles; nitrification, denitrification, and nitrogen fixation; manuring and irrigation as they affect bacteria in the soil, and soil fertility. The book is attractively printed, illustrated and readable.

BAILEY'S TEXT-BOOK OF HISTOLOGY. Revised and Rewritten by Oliver S. Strong, A.M., Ph.D., Associate Professor of Neurology, College of Physicians & Surgeons, Columbia University, and Adolph Elwyn, A.M., Assistant Professor of Anatomy, Columbia University. Seventh edition. Cloth. Price, $7. Pp. 939, with 585 illustrations. New York: William Wood & Co., 1925.

This edition, on account of the death of Dr. Bailey, has been edited by Strong and Elwyn. Strong has been in charge of the section on the nervous system in previous editions, and the high standard of quality which he had then set has been maintained in this. Elwyn has undertaken the preparation of the remainder of the book, rewriting the sections on cytology and on tissue elements. The illustrations include some new photographs and some figures taken from other publications.

Books Received

Books received are acknowledged in this column, and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for more extensive review in the interests of our readers and as space permits.

AVIATION MEDICINE. By Louis Hopewell Bauer, A.B., M.D., Major, Medical Corps, United States Army; Commandant, the School of Aviation Medicine. Published by authority of the Surgeon General. Cloth. Price, $7.50. Pp. 241, with 35 illustrations. Baltimore: Williams & Wilkins Company, 1926.

Qualifications and care of the flier, with especial consideration of effects of altitude.

LIFE AND EVOLUTION. An introduction to general biology. By S. J. Holmes, Ph.D., Professor of Zoölogy in the University of California. Cloth. Price, $3.50. Pp. 449, with 227 illustrations. New York: Harcourt, Brace & Co., 1926.

A book for the general student, well illustrated and suitable to those of college intelligence.

EARS AND THE MAN. Studies in social work for the deafened. By Annetta W. Peck, Estelle E. Samuelson and Ann Lehman. With an introduction by Wendell C. Phillips, M.D., President-Elect of the American Medical Association. Cloth. Price, $2 net. Pp. 217. Philadelphia: F. A. Davis Company, 1926.

Complete consideration of rehabilitation of the deafened, with good bibliography.

THE PRINCIPLES AND PRACTICE OF ENDOCRINE MEDICINE. By William Nathaniel Berkeley, Ph.D., M.D., Recently Attending Physician at the Good Samaritan Dispensary, New York. Cloth. Price, $4.50. Pp. 368, with 60 illustrations. Philadelphia: Lea & Febiger, 1926.

An attempt at complete consideration of our present knowledge of the glands of internal secretion; author presents abstracts from the literature with little critical consideration.

EVOLUTION, GENETICS AND EUGENICS. By Horatio Hackett Newman, Professor of Zoology in the University of Chicago. Cloth. Price, $3.50. Pp. 639, with 99 illustrations. Chicago: University of Chicago Press, 1925.

Revised edition of a standard work, with a new chapter on the Scopes trial.

ESSAYS AND ADDRESSES ON DIGESTIVE AND NERVOUS DISEASES AND ON ADDISON'S ANAEMIA AND ASTHMA. By Arthur F. Hurst, M.A., M.D., F.R.C.P., Physician, Neurologist and Director of Advanced Studies, Guy's Hospital. Cloth. Price, $6 net. Pp. 306, with 64 illustrations. New York: Paul B. Hoeber, Inc., 1924.

Collected essays of a facile English writer on clinical subjects.

MENTAL INVALIDS. Being the Morison lectures delivered before the Royal College of Physicians of Edinburgh in June, 1925. By C. C. Easterbrook, M.A., M.D., F.R.C.P.E., Physician-Superintendent, Crichton Royal, Dumfries. Cloth. Price, 5 shillings net. Pp. 86. Edinburgh: Oliver & Boyd, 1925.

Four lectures on psychiatric diagnosis, with a proposed classification.

Medicolegal

Testimony About Roentgenogram Withheld from Witness

(Bachman v. Quincy, O. & K. C. R. Co. (Mo.), 274 S. W. R. 764)

The Supreme Court of Missouri, division 1, says that in this personal injury case the depositions of two witnesses were taken. One of the witnesses was an expert roentgen-ray picture man. He took a roentgenogram of the plaintiff, and said that he turned it over to the other witness, so that he could examine it and prescribe for the patient. He testified that he took the roentgenogram, and as to what it showed as to the condition of the lower part of the spine. The other witness testified that he got the roentgenogram from the first-mentioned witness and examined it, and testified as to what it showed. Both witnesses were from an osteopathic school of medicine and testified that the school kept all such roentgenograms, and would not permit them to take these out of the school; hence they did not have the roentgenogram while testifying. There could be no question of the right of the first-mentioned witness to testify from his own knowledge as to what the roentgenogram taken by him showed. So far as he was concerned, the roentgenogram was beyond his control. Nor does the court think that the other witness, who showed his perfect familiarity with roentgenograms, was incompetent to testify what one showed, when he examined it in order to know what treatment to prescribe. The fact that he did not have and could not get the roentgenogram did not preclude his evidence. He told the defendant where the roentgenogram was, and the defendant could have had it at the trial. The process of the court was open to the defendant, and the production of the roentgenogram could have been enforced.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, Dallas, April 19-23. Dr. Olin West, 535 N. Dearborn Street, Chicago, Secretary.

Alabama, Medical Association of the State of, Mobile, April 27-30. Dr. D. L. Cannon, 519 Dexter Avenue, Montgomery, Assistant Secretary.
American Association for the Study of Allergy, Dallas, April 20. Dr. A. H. Rowe, 242 Moss Avenue, Oakland, Calif., Secretary.
American Association of Pathologists and Bacteriologists, Albany, New York, April 2-3. Dr. H. T. Karsner, Lakeside Hospital, Cleveland, Secretary.
American Gastro-Enterological Association, Atlantic City, May 3-4. Dr. John Bryant, 338 Marlborough Street, Boston, Secretary.
American Orthopedic Association, Atlanta, April 26-28. Dr. De Forest P. Willard, 1630 Spruce Street, Philadelphia, Secretary.
American Proctologic Society, Indianapolis, April 16-17. Dr. William A. Rolfe, 331 Beacon Street, Boston, Secretary.
American Society of Clinical Investigation, Atlantic City, May 3. Dr. J. H. Austin, University of Pennsylvania, Philadelphia, Secretary.
American Society of Clinical Pathologists, Dallas, April 15-17. Dr. Ward T. Burdick, Metropolitan Building, Denver, Colo., Secretary.
Arizona Medical Association, Globe, April 25-27. Dr. D. F. Harbridge, 407 Goodrich Building, Phoenix, Secretary.
Association of American Physicians, Atlantic City, May 4-5. Dr. F. W. Peabody, Boston City Hospital, Boston, Secretary.
California Medical Association, Oakland, April 26-May 1. Dr. Emma W. Pope, 593 Market Street, San Francisco, Secretary.
Florida Medical Association, Gainesville, May 3-5. Dr. Shaler Richardson, 111 W. Adams Street, Jacksonville, Secretary.
Hawaii Territorial Medical Association, Honolulu, April 25-28. Dr. F. J. Pinkerton, 46 Young Building, Honolulu, Secretary.
Kansas Medical Society, Kansas City, May 4-6. Dr. J. F. Hassig, 804 Elks Building, Kansas City, Secretary.
Louisiana State Medical Society, Monroe, April 15-17. Dr. P. T. Talbot, 1551 Canal Street, New Orleans, Secretary.
Maryland, Medical and Chirurgical Faculty of, Baltimore, April 27-29. Dr. J. A. Chatard, 1211 Cathedral Street, Baltimore, Secretary.
Medical Women's National Association, Dallas, April 18-19. Dr. Lena K. Sadler, 533 Diversey Parkway, Chicago, Secretary.
New York, Medical Society of the State of, New York City, March 29-April 1. Dr. D. S. Dougherty, 17 W. 43d St., New York City, Sec'y.
Oregon State Medical Society, Portland, April 1-2. Dr. F. D. Stricker, Medical Arts Building, Portland, Secretary.
South Carolina Medical Association, Sumter, April 6-8. Dr. E. A. Hines, Seneca, Secretary.

Current Medical Literature

AMERICAN

The Association library lends periodicals to Fellows of the Association and to individual subscribers to THE JOURNAL for a period of three days. No foreign journals are available prior to 1920, nor domestic prior to 1923. Periodicals published by the American Medical Association are not available for lending, but may be supplied on order. Requests should be accompanied by stamps to cover postage (6 cents if one and 12 cents if two periodicals are requested).

Titles marked with an asterisk (*) are abstracted below.

American Journal of Hygiene, Baltimore

6: 1-196 (Jan.) 1926

Measurement of Glare. B. A. Nowakowski, Baltimore.—p. 1.
Biometric Study of Infant Mortality in United States Birth Registration Area, 1919-1922. R. B. Tewksbury, Baltimore.—p. 32.
*Life Tables for Various Racial Groups in Hawaii. H. W. Kung, Baltimore.—p. 74.
*Mountain Malaria in Brazil. N. C. Davis, New York.—p. 119.
Endameba Blattae. R. Kudo, Champaign, Ill.—p. 139.
Resistance of Chicken to Ascaridia Perspicillum. C. A. Herrick, Baltimore.—p. 153.
Therapeutic Action of Quinine Hydrochloride and Certain Quinine Derivatives in Experimental Infections with Plasmodium Praecox. G. H. Boyd, Baltimore.—p. 173.

Vitality Statistics of Racial Groups in Hawaii.—From Kung's inquiry the following facts emerge: The Caucasian component of the Hawaiian Islands shows a mortality which stands lowest as compared with the other elements making up the population. Next, in the order mentioned, are the Japanese, the Chinese, the Filipinos, the Caucasian-Hawaiians and the Hawaiians. The infant death rate of the Filipino is higher than the Hawaiian death rate. The rates of mortality of the various racial groups are not alike in the same locality. The same races, in different localities, show a remarkable adherence to the same mortality rates.

Mountain Malaria in Brazil.—An examination was made by Davis of 201 persons living in railroad construction camps in the mountains. Thirty-nine infected individuals were found, of whom ten were gametocyte carriers. The predominant local anopheline mosquito was *A. bellator*, known in Brazil as *Anopheles* (or *Myzomia*) *luzi*. The presence in the locality of the following additional anopheline mosquitoes was verified: *A. eiseni* (*A. tibiamaculatus*); *A. (Myzorhynchella) luzi*, and *A. (Cellia) argyritarsis*.

California and Western Medicine, San Francisco

24: 33-144 (Jan.) 1926

*Nerve Mechanism in Production and Treatment of Certain Edemas: Rôle of Suprarenals in Preventive Effects of Certain Drugs. P. J. Hanzlik, San Francisco.—p. 33.
Regional Anesthesia. C. E. Phillips and R. H. Johnson, Los Angeles.—p. 37.
*Cesarean Section for Hemorrhage. R. K. Smith, San Francisco.—p. 39.
Differential Leukocyte Count in Acute Inflammatory Conditions of Surgical Importance. N. Evans and P. J. Tunnell, Loma Linda.—p. 41.
*New Technic of Unmodified Blood Transfusion. L. Brooks, San Francisco.—p. 44.
*Treatment of Herpes Zoster. H. P. Jackson, Los Angeles.—p. 46.
Antagonistic Functions of Uterus in Relation to Regional Nerve Blocking. G. T. Cooke, Los Angeles.—p. 55.
Urologic Cases in Women and Children. W. E. Stevens, San Francisco.—p. 57.
*Cholecystography: Value as Diagnostic Procedure. W. W. Boardman and Roger B. McKenzie, San Francisco.—p. 60.
Syphilis in Pregnancy. K. P. Frost, Los Angeles.—p. 63.
Plastic Surgery: Correction of Deformities of Nose and About Orbit. J. P. De River, San Francisco.—p. 64.
Type Treatment of Pulmonary Tuberculosis. S. J. Shipman, San Francisco.—p. 68.
Speech Defects and Disorders. M. F. Gifford, San Francisco.—p. 72.
Diagnosis of Absent Ureteral Calculus: Case. E. S. Pomeroy, Salt Lake City.—p. 74.
Transfusion with Universal Donor: A Fatality: Case. H. E. Butka, Los Angeles.—p. 74.
Primary Carcinoma of Liver: Two Cases. R. W. Langley, Los Angeles.

Nerve Mechanism and Edema.—The importance of a sensory mechanism in the development of chemosis, as indicated by the irregular and contradictory results in the literature, Hanzlik avers, has not been clearly demonstrated. Under controlled conditions, completely negative results have been obtained with mustard oil and ethylmorphine hydrochloride (dionin). There is no reason to believe that an axon reflex or a reflex arc (with peripheral synapse), exists and is indispensable to chemosis. Local anesthetics and nicotine, locally, do not prevent or inhibit chemosis from mustard oil and ethylmorphine hydrochloride, but circulatory depression from any cause whatever is known to prevent or reduce chemosis and edemas. On the other hand, favorable though unconfirmed results on human subjects are reported, indicating that the sensory mechanism is essential in the development of mustard dermatitis of the legs, and local anesthesia by infiltration with procaine inhibits the process independently of local vascular changes. The gross edema in the head and neck regions of rabbits and cats produced by the administration of paraphenylendiamine is due to increased vascular (capillary) permeability, independently of the sensory and motor nerve mechanisms, axon reflexes, etc., and of a number of other factors. This gross edema can be prevented by continuous injections of low concentrations of epinephrine and by drugs (strychnine, santonin, picrotoxin and nicotine) which increase the output of epinephrine from the suprarenals. The possibilities of using strychnine in the prevention and treatment of certain clinical edemas, and other features, are discussed.

Cesarean Section for Hemorrhage.—Among 4,002 obstetric cases occurring that were subjected to analysis by Smith prior to Dec. 31, 1922, placenta praevia—all forms—occurred twenty-eight times, with no maternal mortality and a fetal mortality of six, or 21 per cent.

Unmodified Blood Transfusion.—The method described by Brooks is a modification of the Kimpton-Brown method. The apparatus consists of paraffin coated tubes, needles with obturators, and a pressure suction bulb. The tubes are modifications of the Kimpton-Brown tubes with a capacity of 300 cc. A needle is inserted into the vein of the recipient and plugged by the proper obturator, which, because of the perfect fit, completely fills every part of the hollow of the needle, preventing loss of blood or, what is more important, the beginning of a clot in this needle while the blood is being drawn from the donor. Another needle is now inserted in the selected vein of the donor, usually at the elbow, the paraffin coated tube is attached, and by means of the pressure suction bulb, which is attached to the airway of the tube, a vacuum is created, and 300 cc. of blood can be collected in the average case in less than one minute. The tourniquet is now released, the tube is disconnected and held tip up, and this needle is plugged by the proper obturator. The pressure suction bulb is reversed. The obturator is removed from the needle in the recipient's vein, the paraffin tube is quickly attached and the blood is injected by means of the bulb. This method has been used by Brooks 178 times without a failure to transfuse the desired amount of blood. Both grouping and cross agglutination tests are done as a routine, and out of this number there have been only four reactions.

Red Light Treatment of Herpes Zoster.—Twelve cases of herpes zoster have been treated successfully by Jackson with red light. The most striking feature noted in the treatment was the rapid involution of the lesions, usually beginning after the first exposure to the light. The process of complete involution is accomplished in a period of from two to six days, depending on the severity and extent of the involvement. It consists of a desiccation of the contents of the vesicles with a conversion of the inflammatory products into thin, loosely adherent crusts which separate and fall off easily. Worthy of mention in connection with this treatment is the absolute arrest of the disease process and its extension when treatment is begun early. There is also absence of deep scarring and pigmentation even in the most extensive cases. The source of light is a 1,000-watt red globe, so adjusted that its rays will strike the lesions in a perpendicular direction. These exposures are repeated daily until the lesions are completely involuted.

Value of Cholecystography.—Boardman and McKenzie have made use of cholecystography in 109 cases; in four the dye was given rectally, in thirty-eight by mouth, and in sixty-seven intravenously. Rectal administration was soon abandoned, as the degree of absorption was too uncertain and considerable rectal irritation was produced by the dye. Of cases in which the dye was administered by mouth, seventeen

showed normal visualizations, eleven incomplete and ten no shadows. In this group five patients have been operated on, three of whom gave no shadow, and two incomplete visualizations. In all five there was definite pathologic change in the gallbladder. Of the sixty-seven cases in which the dye was given intravenously, fifteen showed a normal reaction, twenty-six incomplete, twenty-five no shadows, and one patient suffered so severe a reaction with the tetrabromphthalein that no films were taken. Of this group of patients, fifteen have been operated on, seven having given no shadow, seven incomplete shadows, and one a normal shadow. In the latter case there was a definite chronic appendicitis, but the changes in the gallbladder were very slight. Of the remaining fourteen cases, all showed definite pathologic change. Among the cases in which operation was not done, the findings by this method have closely paralleled the conclusions reached by the other methods of study.

Canadian Medical Association Journal, Montreal

16: 1-120 (Jan.) 1926

Preventive Medicine. C. F. Martin.—p. 2.
Treatment of Pneumonia. J. C. Meakins.—p. 7.
Arteriosclerosis. O. Klotz.—p. 11.
Man's Structural Imperfections. A. Keith.—p. 19.
Osteopathy and Chiropractic. W. B. Thistle.—p. 23.
Effects of Anoxemia on Circulation. N. B. Dreyer.—p. 26.
Cancer and Race. A. C. Jost and M. A. Ross.—p. 30.
Use of Low Cervical Operations for Cesarean Section. L. C. Conn.—p. 32.
Acute Rheumatic Fever and Chorea in Children. H. C. Bussiere and L. J. Rhea.—p. 35.
Cecal Stasis. A. R. Munroe.—p. 40.
Possible Source of Error in Roentgen-Ray Findings of Normal Vertebral Column. A. O. Freedman.—p. 44.
Spinal Metastasis from Breast Carcinoma. L. J. Carter.—p. 48.
Photography as Applied to Dermatology. W. R. Jaffrey.—p. 51.
Trench Mouth. F. S. L. Ford.—p. 53.
Therapeutic Value of Roentgen Rays. A. H. Pirie.—p. 54.
Pseudobulbar Paralysis: Case. P. M. Macdonnell.—p. 57.
Lung Abscess Following Removal of Teeth Under General Anesthesia. C. A. Peters.—p. 57.
Food Anaphylaxis. J. C. Lindsay.—p. 58.

Journal of Bone and Joint Surgery, Boston

8: 1-246 (Jan.) 1926

Orthopedic Aspects of Chronic Arthritis. R. B. Osgood, Boston.—p. 1.
Spinal Osteo-Arthritis Involving the Cervical Region. G. R. Elliott, New York.—p. 42.
*Epiphyseal Coxa Vara or Displacement of Capital Epiphysis of Femur in Adolescence. J. A. Key, St. Louis.—p. 53.
*End-Result Study of Arthrodesis of Sacro-Iliac Joint for Arthritis. M. N. Smith-Petersen and W. A. Rogers, Boston.—p. 118.
Systematic Diagnosis in Backache. E. T. Wentworth, Rochester, N. Y.—p. 137.
Rôle of Tensor Fasciae Femoris in Certain Deformities of Lower Extremities. C. C. Yount, Pittsburgh.—p. 171.
*Behavior of Sequestrums in Chronic Osteomyelitis. A. Van Dessel, Boston.—p. 194.
Congenital Elevation of Scapula. R. D. Schrock, Omaha.—p. 207.
Apparatus for Postoperative Management of Guillotine Amputations of Thigh. R. M. Yergason, Hartford, Conn.—p. 216.

Epiphyseal Coxa Vara in Adolescence.—The history of the recognition of epiphyseal coxa vara as a definite clinical entity is sketched by Key. The term coxa vara is defined, and an anatomic and etiologic classification of the various types of coxa vara is given. The incidence is given, and the clinical picture and roentgenologic findings in epiphyseal coxa vara are described in detail. Twenty-four cases are reported. The pathologic specimens reported in the literature are reviewed and discussed. The true pathology is unknown, as no early specimen has been described. The various theories as to the etiology of the condition are critically reviewed, and it is suggested that the condition is due to a weakening of the periosteum binding the head to the neck of the femur. The cause of this weakening is unknown, but it is usually coincident with a period of unusually rapid growth during adolescence.

Result of Arthrodesis of Sacro-Iliac Joint.—In twenty-three of twenty-six cases reviewed by Smith-Petersen and Rogers there has been no pain since operation. Of the three remaining cases one showed a bilateral sacro-iliac traumatic arthritis. One side was operated on and relief of radiation pain resulted. There is still local and radiation pain present on the other side. Two patients complained of persistence of pain in the calf of the leg, but stated that this is far less severe than formerly and is decreasing. They have resumed their former occupations in full. Seven of the twenty-six cases have shown a stiffness in either the calf or hamstring muscles, or both, for varying periods of from two to six months after operation. In two of the twenty-six cases the results are failures.

Disposition of Sequestrum.—Van Dessel's experiments show that in the presence of infection completely separate sequestrums never unite to the newly formed involucrum or to the old bone. The zone of demarcation between the sequestrum and the involucrum, dead and alive, persists until complete disappearance of the former, i. e., the sequestrum. The difference lies in the conception of the sequestrum. If it is really free it must, according to experiments on rabbits, either be absorbed or expelled. It never unites with the new or old bone.

Kansas Medical Society Journal, Topeka

26: 1-36 (Jan.) 1926

Club Feet. H. R. Allen, Indianapolis.—p. 1.
Iodine and Goiter. H. N. Tiben, Wichita.—p. 4.
*Thyroid Survey of 7,051 Students in Grade and High Schools in Topeka. E. G. Brown, Topeka.—p. 8.
*Case of Diabetes Mellitus with Marked Lipemia. H. E. Marchbanks, Pittsburgh.—p. 12.

Thyroid Survey of Topeka School Children.—Brown found that 30.9 per cent of 3,345 boys and 49.7 per cent of 3,706 girls showed thyroid enlargement. Among the girls there was a gradual increase up to 13 and then a drop. Among the boys there was a gradual increase (except at the age of 9 years) to 10, and then a decrease. Among the boys, the greatest number of very slight enlargements was found at the age of 10, and among the girls, at 12. Moderate and marked enlargements occurred rarely. No cases of exophthalmic goiter were diagnosed.

Diabetes Mellitus with Marked Lipemia.—The urine of Marchbank's patient, a boy, aged 6, showed 4 per cent sugar, a large amount of diacetic acid and acetone. The blood had a rather gray, milky appearance and when allowed to stand for a short while the plasma looked like pure cream. The blood sugar was 286 mg. per hundred cubic centimeters of blood and the carbon dioxide was 10.7 per cent by volume. Under treatment with an appropriate diet and insulin, the blood sugar on the tenth day was 130 mg. and the carbon dioxide 50.2 per cent by volume. There was no sugar in the urine after the fifth day.

Nebraska State Medical Journal, Norfolk

11: 1-48 (Jan.) 1926

Gastro-Enterologic Diagnosis. A. D. Dunn, Omaha.—p. 1.
Relation of Psychic and Somatic. B. F. Bailey, Lincoln.—p. 4.
Some Causes of Death in Operations on Gallbladder and Bile Tracts. J. S. Welch, Lincoln.—p. 8.
*Three and One-Half Years' Experience with High Voltage Roentgen-Ray Therapy. A. F. Tyler, Omaha.—p. 12.
Obstetrics and Osteopath. E. C. Sage, Omaha.—p. 16.
Renal Tuberculosis. A. D. Munger, Lincoln.—p. 20.
Modern Aspects of Nutrition: Acid-Base Equilibrium with Reference to Pediatrics. V. E. Levine, Omaha.—p. 23.
*Dilatation of Esophagus in Cardiospasm. C. Emerson, Lincoln.—p. 33.
Treatment of Appendicitis by Roentgen Ray. W. L. Ross, Omaha.—p. 35.
Acrodynia. L. F. Egen, Hastings.—p. 37.

High Voltage Roentgen-Ray Therapy.—Tyler asserts that experience has proved that high voltage roentgen-ray therapy has a definite field in medicine. It is the greatest palliative agent known in the treatment of inoperable malignancies. It is the treatment of choice in fibroid tumors of the uterus no larger than 7.5 cm. in size. It is of great value in the treatment of Hodgkin's disease, splenomyelogenous leukemia, polycythemia, exophthalmic goiter and hypertrophy of the prostate. In accessible cases, radium can be combined with high voltage roentgen rays to advantage.

Dilation of Esophagus in Cardiospasm.—To secure a more complete dilatation than is possible even with the largest sized tube, Emerson employed a Barnes' rubber bag such as is used for dilation of the cervix in cases in which it is necessary to bring on a premature labor. A violin-shaped bag is passed into the stomach, and then under the fluoroscope,

after injecting some barium into it so that it is visible, the bag is pulled back into the cardiac sphincter. The bag is then reinjected until it expands and stretches the sphincter as much as the patient can stand. It is left there an hour each day for three weeks; after that, at increasingly long intervals.

Northwest Medicine, Seattle

25: 1-56 (Jan.) 1926

"Nervous Breakdowns." L. F. Barker, Baltimore.—p. 1.
Neurologic Studies in Psychotic Cases. D. G. Dickerson, American Lake, Wash.—p. 10.
Neurologic Conditions of Head: Early Diagnosis. E. Sachs, St. Louis. —p. 14.
Syndrome of Compression of Spinal Cord. H. W. Woltman, Rochester, Minn.—p. 17.
Epidemic Encephalitis. R. M. Bowell, Bonners Ferry, Idaho.—p. 25.
Physical Unfitness. W. M. Anderson, Portland, Ore.—p. 28.
Mucocele of Frontal Sinus. M. C. Fox, Portland, Ore.—p. 30.
Acute Suppurative Otitis Media. A. W. Howe, Tacoma.—p. 33.
Mediastinum as Focus of Infection. W. L. McClure, Yakima.—p. 36.
Insulin Treatment of Diabetes Complicated by Duodenal Ulcer. B. Holcomb, Portland, Ore.—p. 38.
Mercurochrome-220 Soluble and Gentian Violet: Experimental Use Intravenously. W. J. Pennock and C. Ferguson, Spokane.—p. 39.
Granuloma Inguinale: Case. J. F. Scott, Yakima.—p. 40.
Transplantation of Ureters into Rectum or Bladder. W. J. Stater, Portland, Ore.—p. 41.
*Tenia Saginata: New Method of Treatment. J. S. Saurman, Salem, Ore.—p. 42.

Treatment of Tapeworm.—By means of the duodenal tube Saurman administers nauseating drugs without distress to these patients, thus securing immediate and direct contact of an unchanged drug with the parasite, a quickly following deluge of bile, and a sweeping away by a strong saline solution of a stunned worm before sufficient recovery for reattachment.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

British Journal of Dermatology and Syphilis, London

38: 1-46 (Jan.) 1926

Cutaneous Striae, Purpura, High Blood Pressure, Amenorrhea and Obesity Not Caused by Suprarenal Tumor. F. P. Weber.—p. 1.
*Treatment of Arsphenamine Dermatitis with Sodium Thiosulphate. F. K. Chen.—p. 20.

Treatment of Arsphenamine Dermatitis with Sodium Thiosulphate.—Of ten patients with arsphenamine dermatitis seen by Chen, three have been treated with intravenous injections of sodium thiosulphate. In each case there was rapid improvement in the signs and symptoms. Solutions were prepared from sterile double distilled water on the day on which they were to be used. When this precaution was not observed, quite severe reactions followed the injection. The drug was given in doses of from 0.3 to 0.6 Gm. in 10 per cent sterile aqueous solution, and repeated at daily intervals until improvement occurred.

Irish Journal of Medical Science, Dublin

1-56 (Jan.) 1926

Epidemiology of Tuberculosis. W. D. O'Kelly.—p. 4.
Criticism of Modern Medicine. V. M. Synge.—p. 20.
Sequelae of Minor Head Injuries. A. A. McConnell.—p. 29.
*Case of Acholuric Jaundice Treated by Splenectomy and Epinephrine Injections. D. A. MacErlean.—p. 35.

Splenectomy in Acholuric Jaundice.—The most striking clinical phenomena in the case cited by MacErlean were the rapid disappearance of the jaundice after splenectomy and the rapid subsidence of toxic symptoms after the administration of epinephrine. There was a complete absence of axillary and pubic hair; the patient was 21 years of age, and menstruation had not occurred until the age of 18. The illness manifested itself for the first time at the age of 12. She was then jaundiced for three years. The last attack had been of eighteen months' duration. The symptoms included jaundice, enlarged spleen, a typical blood picture, with high color index and absence of nucleated red cells, the presence of normal gastric secretion, the absence of any nerve lesions, a positive van den Bergh test and a previous history of jaundice.

Lancet, London

1: 61-110 (Jan. 9) 1926

Life Assurance Medicine: Progress and Limitations. O. May.—p. 61.
Functional or Organic Mental Disorders. C. P. Symonds.—p. 64.
*Treatment of Duodenal Ulcer. C. A. Pannett.—p. 68.
*Emetine in Treatment of Hepatic Abscess. P. Manson-Bahr and R. M. Morris.—p. 69.
*Disease of Cervical Spinal Cord: Two Cases. H. Carlill and E. R. Carling.—p. 70.
*Oxygen Deficiency Theory and Experimental Tetany. J. A. Campbell. —p. 72.
*Ischemic Necrosis of Heart Muscle Showing Evidence of Embolism Elsewhere. G. Klionsky.—p. 74.
Comparative Results in Infant Welfare. A. Hodgson.—p. 74.

Duodenectomy for Duodenal Ulcer.—When operation is indicated in cases of duodenal ulcer, Pannett prefers partial duodenectomy to gastro-enterostomy. While he does not recommend the general adoption of partial duodenectomy for duodenal ulcers in the present state of knowledge, he insists that the results of gastrojejunostomy are not so satisfactory that there is no need to seek some improvement in the handling of these cases. Partial duodenectomy has proved itself to be without undue risk.

Use of Emetine in Treatment of Liver Abscess.—Manson-Bahr and Morris emphasize the fact that in the treatment of liver abscess emetine is to be used as an adjuvant to such a well established surgical measure as aspiration. The rapid effect of emetine in acute amebic hepatitis is probably to be ascribed to the action of emetine on the amebas themselves, and the fact that none of these organisms was found in the liver pus after evacuation in the two cases reported may also be attributed to emetine; but there are no grounds for believing that, under ordinary circumstances, the administration of this drug in any way hastens or affects the absorption of pus which has already been formed within the liver.

Disease of Cervical Spinal Cord.—Two cases of disease of the cervical spinal cord are reported by Carlill and Carling. In each case there was present varying degree of subarachnoid block, as well as other features of much clinical interest. One was a case of hypertrophic cervical syphilitic pachymeningitis, and the other a case of intramedullary cervical gliosarcoma.

Oxygen Deficiency as Cause of Tetany.—Experiments described by Campbell support the oxygen deficiency theory of Morris in the etiology of tetany. It is shown that in many different experimental conditions in which tetany eventually occurs, the tissue oxygen tension is markedly decreased before the onset of the tremors. It is shown also that muscular contraction causes a marked increase of oxygen tension in the tissues, and it is tentatively suggested that the purpose of the muscular contraction in tremors and convulsions is to supply oxygen at increased tension to the tissues.

Ischemic Necrosis of Myocardium with Embolism Elsewhere.—In Klionsky's case, besides the precordial pain, there was a sudden loss of consciousness for two or three hours. The next evening the man had amaurosis and right internal strabismus. The heart's action was weak, and there were no signs of valvular disease. There was no paresis anywhere else at that time, but he complained of severe headache, especially in the occipital region, which continued for two or three days. Examination of the fundi showed multiple hemorrhages and extensive edema of both retinas. The systolic blood pressure was 110 mm. of mercury. No abnormality was detected in the urine. The blood urea was normal and the Wassermann reaction negative. The roentgen ray showed slight enlargement of the first part of the aorta. There was no history of rheumatic fever. The patient gradually recovered, the retinal edema slowly disappeared, and the hemorrhages became absorbed. The strabismus also soon disappeared. Klionsky feels that this case illustrates a sequence of events somewhat as follows: atheroma of the first part of the aorta, with probable involvement of the coronary arteries; either thrombosis of a branch of a coronary artery or embolism due to the separation of a small plaque in the aorta; ischemic necrosis of the heart muscle supplied by that branch; deposition of clot on the inner surface of the heart wall, resulting in the formation of emboli in the brain (one causing strabismus) and in the retinal arteries (causing hemorrhages, with secondary retinal edema).

Bulletins de la Société Médicale des Hôpitaux, Paris

50: 1-31 (Jan. 8) 1926

*Syphilitic Meningoradiculitis with Xanthochromia. Hudelo and Mouzon. —p. 5.
*Cancer of Esophagus and Radium. J. Guisez.—p. 8.
Serum Treatment of Meningo-Ependymitis. Vialard and Darleguy.—p. 14.
*Eight Observations of Phrenicotomy. E. Sergent et al.—p. 20.

Syphilitic Meningoradiculitis.—Hudelo and Mouzon describe a case of meningoradiculitis chiefly localized in the lumbosacral region. It appeared in the fourth year of syphilitic infection in a man, aged 27. Pain, paresis and anesthesia in the legs were the clinical features. There was no paralysis of the sphincters, usually present with the cauda equina syndrome, but there was yellowish discoloration and rapid coagulation of the cerebrospinal fluid, the Froin syndrome. In the case reported, great improvement was realized under treatment continued regularly during the six years to date. The cerebrospinal fluid is limpid but the syphilitic reactions are still pronounced.

Radium in Cure of Cancer of the Esophagus.—Guisez' six patients with cured cancer of the esophagus had found swallowing more and more difficult until it became impossible. Under radium treatment, deglutition became normal and the malignant tumor completely healed. In two the recovery has persisted for fourteen years. One of them, a physician, celebrated recently his eightieth birthday. Other cases date from two to thirteen months. An improvement in ability to swallow was manifest after one or two applications of the radium. At least 0.1 Gm. of radium bromid, in two or three tubes, end-to-end, were applied every second day for ten or twelve hours, to a total of five or six applications. Guisez emphasizes that a long catheter should be used for introduction of the radium into the esophagus. The radium tubes should cover the whole area of the stenosis, and the filters should be thick, to arrest the secondary rays. Complete impermeability, metastases, paralysis of the laryngeal nerve and cachexia are contraindications for the radium treatment. The good results are ascribed to the fact that cancer of the esophagus is usually of the basal-cell type, more responsive than any other to the radium.

Eight Cases of Phrenicotomy.—Sergent, Baumgartner and Bordet's eight cases include two of pulmonary tuberculosis, four of bronchiectasis and two of abscess of the lung. Phrenicotomy appears to be rather a benign operation. No grave complications occurred in Alexander's 240 cases, nor in the eight here reported. Nevertheless a fatal outcome has been recorded in a few instances; two in Leriche's extensive experience; one patient died during the operation, the other the next day. The process of cicatrization after phrenicotomy may be very slow. Notable improvement may not be manifest until six or eight months, or even a year afterward. In Rist and Chauffard's cases the patients improved after one or two months. The therapeutic results of phrenicotomy depend on the pushing up of the diaphragm. No real improvement can be expected as long as the paralyzed half of the diaphragm does not rise more than 2 cm. This rise may be retarded by stiffness of the lung or pleural adhesions; and an intercurrent complication may entirely annul the results of the operation. Retention of secretions may be one of these complications. The effect of phrenicotomy is best in unilateral pleuropulmonary lesions restricted to the inferior pulmonary lobe. It is possible that rupture of an intrapulmonary abscess, which might occur with induced pneumothorax might be avoided by phrenicotomy.

Comptes Rendus de la Société de Biologie, Paris

93: 1401-1460 (Dec. 11) 1925. Partial Index

*Local Vaccination. Brocq-Rousseu et al.—p. 1403.
Latent Period in Experimental Hermaphrodism. A. Lipschütz.—p. 1409.
Endocrine Activity of Ovarian Grafts. Voss.—p. 1411.
*Diabetes Insipidus in Neurosyphilis. L. Babonneix and J. Lhermitte. —p. 1415.
Flocculation Test in Syphilis and Tuberculosis. A. Vernes et al.—p. 1425.
"Transmissible Autolysis." Reply. J. Bordet.—p. 1432.
Typhoid Bacillus and Oysters. S. Costa et al.—p. 1439.
*Visualization of Coronary Arteries. Rouslacroix.—p. 1446.
Arterial and Venous Tension. L. Payan and E. Giraud.—p. 1447.
Center for Epinephrine Secretion. Houssay and Molinelli.—p. 1454.
Action of Insulin on Basal Metabolism. Castex and Schteingart.—p. 1459.

Local Vaccination Against Streptococcus.—Brocq-Rousseu, Urbain and Barotte inoculated guinea-pigs with filtrates of streptococcus cultures from glanders in horses. The experiments demonstrated that these cultures contain Besredka's antivirus, the same as cultures of streptococci from man. The immunizing action of the filtrates was manifest with intradermal injections, and still more when applied as a dressing. All other ways of injection proved ineffectual. With a dressing applied to an erosion on the abdominal wall, the animal became immunized in eighteen hours against several lethal doses of the streptococcus, injected subcutaneously. The immunization is local since no antibodies could be detected in the serum of the vaccinated.

Diabetes Insipidus from Neurosyphilis.—Babonneix and Lhermitte observed a case of diabetes insipidus occurring after operation for cancer of the breast in a syphilitic woman, aged 42. Necropsy revealed a specific basilar meningitis and lesions in the infundibulum and tuber cinereum. The pituitary seemed to be normal. Polyuria of uncertain origin suggests antisyphilitic treatment.

Visualization of Coronary Arteries by Iodized Oil.—Rouslacroix has obtained clear roentgenograms of the coronaries and all their branches by using injections of iodized oil. A dose of 2 cc. is injected in each artery. He believes that this method might be utilized in study of heart disease in which the coronaries may be involved, as in certain arrhythmias or angina pectoris.

Presse Médicale, Paris

34: 33-48 (Jan. 9) 1926

*Filtrable Form of Tubercle Bacillus. F. Bezançon and Philibert.—p. 33.
*Prognosis of Pulmonary Tuberculosis. A. Pissavy.—p. 35.
Spontaneous Metatarsal Bone Tumor. A. D. Radulesco.—p. 37.

Rôle of Nonacid-Resisting Tubercle Bacilli.—Bezançon and Philibert agree with Kuss, Bernard and Debré that the part of the filtrable nonacid-resisting bacillus is insignificant in hereditary tuberculosis. Its rôle may be different in contagion. Numerous clinical facts demonstrate that contagion occurs from it even with sputum free from acid-resisting tubercle bacilli. Further research may reveal the part of the filtrable bacillus in contagion, and indicate new prophylactic measures against tuberculosis.

Prognosis of Pulmonary Tuberculosis.—Pissavy cites Guinard's observations made for ten years on tuberculous subjects treated in one sanatorium. Patients in whose sputum the tubercle bacillus was constantly present all died within ten years—73 per cent of them in less than three. The mortality among those in whose sputum the bacillus was found from time to time or exceptionally was from 40 to 60 per cent. Naveau's records showed that the mortality among tuberculous patients with an induced pneumothorax was 45 per cent within the first three years; 51 per cent within five years and 71 per cent within ten years. The induced pneumothorax thus seems to be effectual for about three years; later than this the mortality is about the same among those treated with pneumothorax or otherwise. Pissavy suggests to classify cases by the number of tubercle bacilli in the sputum, that is, to make a distinction between those with many and those with few.

Pratica Pediatrica, Turin

2: 289-320 (Oct.) 1925

Examination of the Tongue in Children. G. B. Allaria.—p. 289.
Vaccine Therapy in Pneumonia. G. P. Porta.—p. 301.
*Febrile Acetonemia in Children. E. Modigliano.—p. 304.

Acute Acetonemia.—Modigliano has encountered in the last two years about 100 cases of an acute febrile acetonemia in children. There was no vomiting, and the symptoms subsided when cow's milk was dropped or breast milk feedings restricted, and sodium bicarbonate was given by mouth and rectum. In one case the fever kept up for a week, notwithstanding these measures. Then he learned that cow's milk was being surreptitiously given besides; when this was stopped recovery was soon complete.

Semana Médica, Buenos Aires

2: 877-944 (Oct. 8) 1925

*Staining the Tubercle Bacillus. A. F. Poiré and M. Arzeno Carranza. —p. 877.
*Primary Cancer of Common Bile Duct. D. Mosto.—p. 923.

*Nephrosarcoma in Infant. E. Foster and J. R. Mendilaharzu.—p. 926.
Subconjunctival Injections of Copper Sulphate in Trachoma. Lijó Pavia and M. Dusseldorp.—p. 930.
Congenital Laryngeal Stridor. M. Pacheco.—p. 933.

Improved Staining Technic for Tubercle Bacilli.—Poiré and Carranza give the details of sixty-one different methods that have been published for staining tubercle bacilli in sputum; also of seventeen methods which aim to stain the chromophile granules. They tabulate the findings in 558 cases in which the Ziehl-Neelsen, the Schulte Tigges, the Konrich, the Lesieur and the Kühne methods were applied parallel to their own method. They claim for the latter technic that it requires seconds instead of minutes, as with the best of other methods, and it stains the background without interfering with cytologic examination. The Schulte-Tigges and the technic here described showed three times as many bacilli as the Ziehl-Neelsen, and both gave positive findings in 15 per cent more of the cases. The main features of the Poiré-Carranza method are that the sodium sulphite is heated to 80 C. (it works then as rapidly as nitric acid), and the counterstaining is with a dilute solution of methylene blue. The specimen is slowly heated, but never above 60 C. A bibliography of 716 international titles is appended.

Primary Cancer of Common Bile Duct.—Analysis of the necropsy findings in Mosto's two cases confirm the necessity for suspecting malignancy in all cases of persisting retention of bile.

Embryonal Nephrosarcoma in Infant.—The child seems to be thriving now, a few months since the tumor in the left side was treated with radium at the age of 14 months. The tumor was palpated from the spine to the iliac crest and beyond the median line. It was movable and was not tender, and seemed to be round, with a diameter of 10 cm. at least. Foster and Mendilaharzu had two tubes of radium buried in the tumor through a laparotomy incision; they were left for twenty-four hours. Except for slight fever for five days, no untoward reaction was observed, and in a week the tumor had subsided to a third of its former size. In two weeks not a trace of the tumor could be palpated and this continued for three months, when the tumor became manifest again, but smaller and lower than before, and it subsided anew under repetition of the radium treatment. The child (male) is now 22 months old and weighs 11,760 Gm. Two roentgen-ray exposures have been given in the interim.

2: 1137-1204 (Nov. 5) 1925

*Anemia as Factor in Angina Pectoris. R. A. Bullrich.—p. 1137.
Plague Meningitis. J. R. Paso.—p. 1139.
*Absence of Clavicles. J. P. Garrahan and J. C. Achinelly.—p. 1151.
Case of Closed Pyonephrosis. Landivar and Ruiz.—p. 1157.
*Pancreatic Fistula. N. López Isnardi and J. Zanardo.—p. 1166.
*Chronic Rheumatism. E. Pietranera.—p. 1170.
Sanocrysin for Treatment of Tuberculosis. Arreguine.—p. 1176.
Enteropathies from Putrefaction; Treatment. E. S. Weiler.—p. 1178.
Prof. G. Marinesco. M. Samovici.—p. 1183.

Aggravating Influence of Anemia on Angina Pectoris.—Bullrich has encountered two new cases during the past year, in addition to the five on which he based his recent statements in regard to the injurious influence of anemia on the development and course of angina pectoris. The fatal angina pectoris developed in pernicious anemia in one, and in the course of syphilitic vascular disease in the other, both middle-aged women.

Cleidocranial Dysostosis.—There were four cases in the family described, including the father. His fontanels had never become normally ossified; the lack of clavicles had never inconvenienced him. The Wassermann test was positive in one boy, negative in the others.

Pancreas Fistula.—The long pedicle left after the cyst in the pancreas had been sutured to the skin, five months before, was implanted in the stomach as the fistula refused to heal. No by-effects have been observed, and if the gastric secretion should be depressed by such an operation it would be a simple matter to give hydrochloric acid. Eight illustrations show the technic applied.

Chronic Rheumatism.—Pietranera argues that chronic rheumatism is a malady of complex origin, liable to occur at any period of life, even intra-uterine. It develops insidiously until summation of causal factors—temporary or permanent—entails accumulation of a plastic substance in the soft parts from sluggish expulsion of waste products. This accumulating plastic substance acts like a foreign body, mechanically impeding the vital processes.

Deutsche medizinische Wochenschrift, Berlin

52: 93-132 (Jan. 15) 1926

*Pyemia After Tonsillitis. E. Fraenkel.—p. 93.
Stomach, Liver and Pancreas. W. Arnoldi and M. Schechter.—p. 96.
Fractional Examination of the Stomach. O. Rompe.—p. 97.
Roentgen-Ray Dosage. G. Gabriel.—p. 99.
*Glycemia in Rabbits. II. M. Lévai and O. Waldbauer.—p. 101.
Pluriglandular Changes with Pituitary Tumors. J. Szántó.—p. 103.
Malformations of the Omphalomesenteric Duct. B. Wollmann.—p. 105.
*Softening Principle in Treatment of Glaucoma. C. Hamburger.—p. 106.
Registration of Intestinal Temperature. Van der Reis.—p. 108.
Physics of Spongiosa Bone. C. Göcke.—p. 108.
Pregnancy Disturbances. B. Aschner.—p. 109.
Management of Delivery with Contracted Pelvis. A. Heyn.—p. 111.
Treatment of Fever in Childbirth. E. Zweifel.—p. 113.
Gymnastics for Women. G. Kaboth.—p. 114.
Psychology and Philosophy Abroad. T. Ziehen.—p. 118. C'cn.
Tuberculosis of Testis and Epididymis. E. Wehner.—p. 128. C'cn.

Pyemia After Tonsillitis.—Fraenkel made necropsies in fifteen cases of pyemia following tonsillitis. It usually begins by direct infection of the tonsillar veins, which may progress continually into the jugular vein, or may leave parts of its path free. Anaerobic bacteria were one of the important causes; streptococci and pneumococci were found in other cases. Pyemia originating in the lymph nodes is rare. Chills may be absent. Tenderness of the side of the neck is frequent. Ligation of the jugular vein seems rational, but all the six patients in his experience on whom it was performed died.

Blood Sugar Regulation in Rabbits.—Lévai and Waldbauer were able to influence the blood sugar level in rabbits by injecting various drugs and hormones. Administration of insulin mixed with calcium or parathyroid prevented convulsions.

The Softening Principle in Treatment of Glaucoma.—Hamburger lowered the intra-ocular tension in a case of glaucoma by cauterization of two points of the upper limb of the cornea with silver nitrate. Inflammations lower the eye tension—contrary to what occurs in other tissues.

Medizinische Klinik, Berlin

22: 81-120 (Jan. 15) 1926

*Glycolysis, Insulin and Coferment. Brugsch and Horsters.—p. 81.
*Strengthening Action of Drugs by Fractioning. Gordonoff.—p. 84.
Insulin and Social Insurance. P. Mahler.—p. 90.
Varioloid. W. Frégonneau.—p. 91.
Dressing the Navel in the New-Born. R. Zimmermann.—p. 92.
The Hemogram. R. Köster and Brase.—p. 93.
*Studies in Herpes. P. Rezek.—p. 95.
*Bock's Microscopic Hormone Test. M. Berek.—p. 99.
Valvular Defect and Occupational Injury. Von Schnizer.—p. 102.
Electrophysical Treatment. B. Berliner et al.—p. 105.
Survey on Psychology, etc. W. Stekel.—p. 106. C'cn, p. 148.
Quéry's Serum Treatment of Syphilis. F. Pinkus.—p. 119.

Glycolysis, Insulin and Coferment.—Brugsch and Horsters report experiments which speak for the significance of insulin as a coferment of synthesis of a hexosediphosphate. It acts by changing glucose into a labile isomer. The hexosediphosphate of the muscle (Embden's lactacidogen) is not identical with the analogous compound that forms in fermentation of yeast. Insulin does not act as a coferment in the latter reaction, although Virtanen has found that it reactivates lactic acid bacilli freed from their coferment. They found at least 100 units of insulin per hundred grams of muscle in dogs eight to fourteen days after pancreatectomy, and believe that the muscles produce it. They believe that the insulin which occurs wherever the plant builds starch is identical with the insulin of animal origin. They found 100-200 units per hundred grams of acorns, wheat, corn, etc. They hope to be able to produce a much cheaper insulin from such sources.

Strengthening the Action of Drugs by Fractioning.—Gordonoff reviews the results of investigations made by Bürgi's school on the action of divided doses. If the interval is short—for example, only five minutes—two half doses of urethane produce a twofold stronger effect than the whole

dose given at one time. Bürgi explains it by the inability of cells to take up in a definite period of time more than a definite amount of the substance. Similar results have been obtained with other drugs, and on the isolated hearts of animals. The principle might be used in treatment of morphine addicts—giving half the previous dose divided in two portions, administered at a short interval.

Studies in Herpes.—Rezek reports an auto-observation on herpes simplex which recurs every four to eight weeks. His wife had the first herpes in her life after a year of marriage. Transmission to the rabbit cornea, and production of herpes encephalitis proved successful.

Bock's Microscopic Hormone Test.—Berek investigated Bock's claims from the physical standpoint. The casual initial position of the anisotropic crystals decides as to the degree read on the analyzer. He regards the easy proof of the presence of anisotropic substances in the blood as the only valuable feature of the method, but he emphasizes Bock's good faith and willingness to help in the investigations of his claims.

Münchener medizinische Wochenschrift, Munich

73: 91-134 (Jan. 15) 1926

Prognosis of Tuberculosis. Bäumler.—p. 91.
*Ether Treatment of Postoperative Bronchitis. H. Seidl.—p. 95.
Immunization Against Cancer. V. E. Mertens.—p. 97.
*Fluorescence of Oil After Irradiation. J. Becker.—p. 99.
*Three Theses on Neuroses. S. Loewenthal.—p. 99.
*Inhibition of Growth of Sprouts by Serum. M. Stern.—p. 101.
*Treatment of Gastric Ulcer. J. C. Lehmann.—p. 101. Reply. Morawitz. —p. 107.
*Hemorrhage from Gastric Ulcer. E. Schwarz.—p. 104.
"Treatment of Gastric Ulcer." E. König.—p. 106.
Photographic Copies of Reprints. W. Arndt.—p. 107.
*Treatment of Tuberculosis. A. Herrmannsdorfer.—p. 108. C'cn.
The Physician and the People's Health. E. Liek.—p. 112.
Examination of Infant's Nurse. M. Klotz.—p. 116.

Ether Treatment of Postoperative Bronchitis.—Seidl had fine results with Bier's method in forty-six cases of postoperative bronchitis. The method is dangerous with bronchopneumonia. He injects daily a solution of ether and olive oil (0.5 Gm. of each) with addition of a local anesthetic. He considers the method the treatment of choice and explains its action as shock, produced by products of local coagulation of proteins of the patient.

Fluorescence of Oil After Irradiation.—Becker found that vegetable oils acquire after irradiation with a quartz lamp a yellow fluorescence similar to that of cod liver oil.

Three Theses on Neuroses.—Loewenthal maintains the following: 1. A true traumatic neurosis in Oppenheim's sense does exist, although it is rare. 2. Neurasthenia is a congenital deficiency, and is never due to mental strain alone. 3. Hysteria originates on a constitutional basis by wrong direction of the will.

Inhibition of Growth of Sprouts (Lupines) by Otosclerosis Serum.—Stern found an inhibition of the growth of *Lupinus albus* in the serum from patients with otosclerosis, cancer, and especially tuberculosis.

Treatment of Gastric Ulcer.—Lehmann agrees with the authors who incriminate a chronic gastritis as cause of ulcers. The main aim should be a preventive regulation of the diet in subjects predisposed to ulcer.

Hemorrhage from Gastric Ulcer.—Schwarz attributes the hemorrhage following surgical interventions on the stomach to unnecessarily rough manipulation by the surgeon. Internal measures will arrest slight hemorrhage. An early second intervention is indicated with profuse postoperative hemorrhages. With grave spontaneous hemorrhages, he also advises not to wait too many hours.

Treatment of Tuberculosis by Transmineralization.—Sauerbruch decided to try Gerson's dietetic treatment of tuberculosis. They report together with Herrmannsdorfer very favorable results in tuberculosis of skin and in lupus, and fair results in tuberculosis of the lungs and bones. Gerson discards sodium chloride, canned and smoked food, restricts meat and strong condiments, and recommends milk, fats, plenty of fresh fruits and vegetables, flours, eggs, rice, oatmeal and sugar. He gives daily 45 Gm. of cod liver oil with addition of phosphorus (phosphorus, 0.025; cod liver oil, 300) and a mixture of mineral salts.

Zeitschrift für Geb. und Gynäkologie, Stuttgart

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*Rupture of Uterus with Tear in Bladder. M. Hagenbuch.—p. 211.
Pathogenesis of Puerperal Eclampsia. G. Acconci.—p. 229. Treatment. —p. 253.
Mixed Mesenchymal Tumor of Body of Uterus. O. Ritter.—p. 266.
*Supreme Importance of Dilatation Period in Childbirth. B. Aschner. —p. 272.
The Kyphoscoliosis Heart and Gestation. H. Heidler.—p. 294.
*The Vaginal Flora at Term in Prognosis. H. O. Neumann.—p. 303.
The Appendix and Dysmenorrhea. G. Burckhard.—p. 320.
Laceration of the Tentorium. H. Glatz.—p. 325.
Tumors and Tuberculosis of Deformed Uterus. T. Brandess.—p. 341.
*Urobilinogenuria in Pregnancy. W. Schiller and F. Ornstein.—p. 352.
Research in the Netherlands on the Onset of Menstruation. L. Bolk.—p. 364.
Ovarian Pregnancy. P. Steinweg.—p. 380.
Kielland's Operation for Genital Prolapse. Sachs.—p. 384.
*Bladder Made from Sigmoid Loop. P. Strassmann.—p. 406.
*Action of Radium on Carcinoma Cell. Philipp.—p. 431.

Rupture of Uterus with Laceration of Bladder.—Hagenbuch tabulates fifty-two cases from the records and describes one personal case. In the thirty-five since 1905, 40 per cent terminated in recovery.

The Prognosis of Childbirth.—Aschner declares that we have been mistakenly attributing to contracted pelvis disturbances which in reality are due to the soft parts, especially delayed and defective dilatation. The efforts for dilatation are what exhausts the woman and every means should be applied to facilitate the dilatation. The most effectual and least harmful method to accomplish this, he says, is to dilate the external os with the fingers or entire hand when the cervix is unfolded. By applying this measure at the proper time, many complications and interventions can be avoided, as he has established by analysis of 364 deliveries treated on this principle. Combined with a little pituitary extract and a few whiffs of ether, the childbirth approximates the ideal of painless delivery. An abnormally protracted and painful childbirth is not a natural process, and hence requires more than to be left to Nature alone. The great frequency of constitutional anomalies and what he calls domestication injuries explain the relative frequency of these soft-parts disturbances and abnormal labor conditions even without appreciable anatomic anomalies. Since he has been applying this principle to all elderly primiparas, and in cases with premature rupture of the membranes or abnormal labor pains, he has had no instances of puerperal infection, laceration of the cervix or other injury to mother or child.

The Vaginal Flora at Term.—Neumann found that only 36.50 per cent of 400 parturients had pure cultures of the Döderlein bacillus in the vagina (purity I) as term approached, and the morbidity in this class (free from complications) was 4 per cent. It was 5.5 per cent in the purity III class which formed 42 per cent of the total.

Urobilinogenuria in the Pregnant.—Schiller and Ornstein state that an intact tubal pregnancy does not entail urobilinogenuria any more than a normal pregnancy. Its appearance indicates that there is or has been in the last two or three days extravasation of blood. But after the hematoma becomes organized and encapsulated there is no further elimination of urobilinogen by the urine.

Transposition of Sigmoid Loop to Make New Bladder.—Strassmann reports the successful outcome of reconstruction of the bladder out of the sigmoid flexure in a case of inveterate vesicovaginal fistula with contracted bladder from chemical corrosion (self-treatment for leukorrhea). He summarizes the instances on record of bowel-urinary apparatus plastic operations, adding that the sigmoid loop seems by far the best adapted for reconstruction of the bladder, judging from the experiences to date.

Action of Radium on Carcinoma Cell.—Philipp reports experiences which refute the assumption that radium ever exerts a stimulating action on the growth of cancer cells. His findings confirm, however, that there can be no standard dose; each case has to be treated individually.